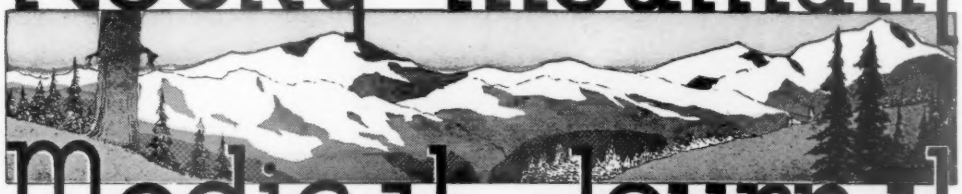
Rocky Mountain Medical Journal



New Mexico's Annual Session Minutes

Vol. 48—No. 7
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JULY, 1951

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Manuscripts: Scientific Articles, Case Reports, etc., from any state for which this is the Official Journal should be submitted to the Scientific Editor for that state as named in the Editorial Board, above. Other material from any participating state should be submitted to the Associate Editor for that state as named above. Manuscripts from outside the Rocky Mountain area should be sent direct to the Journal office. Manuscripts must be typewritten, double or triple spaced, using only one side of each sheet. It is the policy of this Journal to omit bibliographies.

Advertising: National representatives: The State Journal Advertising Bureau, 535 North Dearborn Street, Chicago 10, Ill. Local advertising from firms in the Rocky Mountain area should be submitted to the Associate Editor of the appropriate state or to the Journal office. Advertising forms close on the 20th of the month preceding publication; allow ten days additional to insure submitting proofs for approval.

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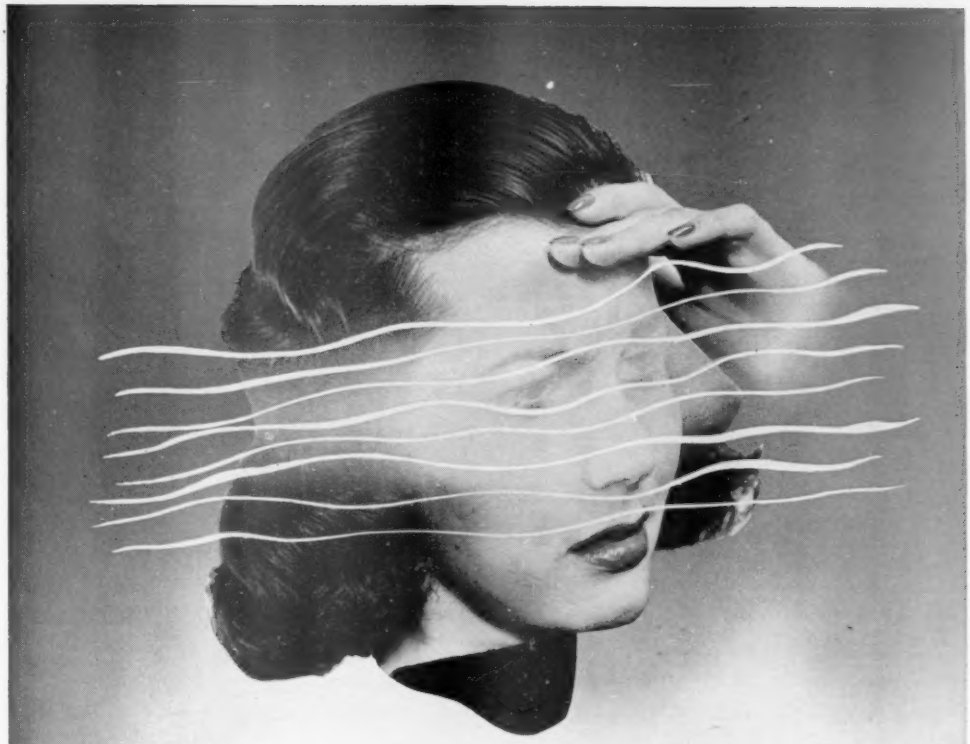

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THE COLORADO STATE MEDICAL SOCIETY

NEXT ANNUAL SESSION: SHIRLEY-SAVOY HOTEL, DENVER, SEPTEMBER 18, 19, 20, 21, 1951.

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Foundation Advocate: Walter W. King, Denver.

House of Delegates: Speaker, Wiley Jones, Denver; Vice Speaker, Paul R. Hildebrand, Brush.

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General Counsel: Mr. J. Peter Nordlund, Attorney-at-Law, Denver.

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MONTANA MEDICAL ASSOCIATION

NEXT ANNUAL SESSION: GREAT FALLS, SEPTEMBER 13, 14, 15, 16, 1951.

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Terms of Officers and Committees expire at the Annual Session in the year indicated. Where no year is indicated, the term is for one year only and expires at 1951 Annual Session.

President: Clyde H. Fredericksen, Missoula.
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Vice President: James M. Flinn, Helena.
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Asst. and Acting Secretary-Treasurer: Everett H. Lindstrom, Helena.
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THE UTAH STATE MEDICAL ASSOCIATION

NEXT ANNUAL SESSION, SALT LAKE CITY, SEPTEMBER 13, 14, 15, 1951.

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1. Mann, G. V., and Stare, F. J.: Nutritional Needs in Illness and Disease, J.A.M.A. *142*:409 (Feb. 11) 1950.

2. Barborka, C. J.: Treatment by Diet, ed. 5, Philadelphia, J. B. Lippincott Company, 1948, pp. 538-547.

3. Welsh, C. B.; Adams, M., and Wakefield, E. G.: Metabolic Studies on Chronic Ulcerative Colitis, J. Clin. Investigation *16*:161, 1937.

4. Bercovitz, Z., and Page, R. C.: Metabolic and Vitamin Studies in Chronic Ulcerative Colitis, Ann. Int. Med. *20*:239 and 254, 1944. Mackie, T. T.; Eddy, W. H., and Mills, M. A.: Vitamin Deficiencies in Gastro-Intestinal Disease, Ann. Int. Med. *14*:28, 1940.

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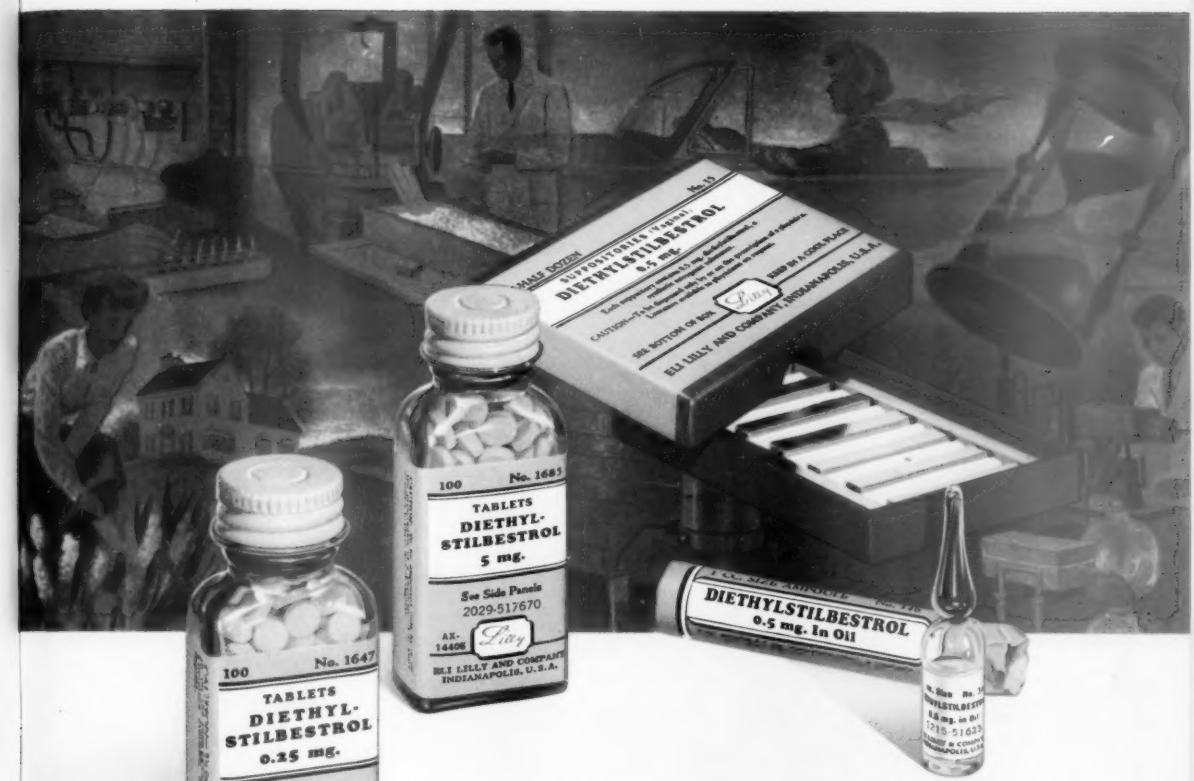

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Rocky Mountain Medical Journal
Colorado
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JULY
1951

Editorial

A New Leader Takes the Reins

OUR new A.M.A. President, Dr. John W. Cline of San Francisco, delivered his inaugural address over a national broadcast and before physicians assembled in Atlantic City on June 12. It was a privilege for those of us who could not attend, to listen in, and we are all proud of the leadership and stature of Dr. Cline. He is built of the timber it takes to carry on the monumental work of Dr. Elmer Henderson, his worthy predecessor, during these critical times.

Dr. Cline, following his oath of office, reviewed the aims and objectives of the A.M.A. Though the organization is over a century old, it is young in the world, as America is young. The world looks to us as the guiding light in academic and scientific freedom. For this the A.M.A. has been fighting for the past two and one-half years against the empty promises of would-be socializers. The fight has been carried to the people in full confidence that they shall not submit to promoters whose political ambitions exceed their interest in what is best for Americans, their families and their futures. The citizens have not disappointed us and therefore continue to receive the best medical and hospital care on earth. The outlook for expectant mothers, growing children, all people during their span of greatest productivity and responsibility and for satisfaction and length of life itself, has never before been approached in the history of mankind. People of America need but to be reminded of the victories of scientific medicine since 1900, quality of medical training, status of our institutions, the spectacular growth and success of voluntary group health and hospital plans. Our nation is entitled to continuation of its progress, and our profession will not let the nation down.

Dark clouds of war again hang over the world, and never before have our own shores and cities faced the possibility of participation in global catastrophe. Freedom from such hazardous potentialities is not in the foreseeable future. Who but the medical profession can and will stand ready to save and preserve countless thousands of lives? Direction of civil defense is among our other tremendous responsibilities.

A nation's greatest blessings may be accepted as natural and spontaneous facts, their source overlooked. None will deny that good health is the greatest asset of an individual or a people. The A.M.A., its subsidiary organizations, and its physicians hold innumerable meetings, publish hundreds of journals, study industrial hazards, place physicians in rural areas, compile health and mortality statistics, expose quackery, build and equip blood banks, standardize medical education—all for the benefit of humanity. Futhermore, these are enterprises of the profession itself. These are but a few of the services provided by organized medicine. Thirty-six states now have "grievance committees" or "medical grand jury plans" to hear and adjudicate differences between patients and their physicians. We have risen to aid medical schools in financial distress. Despite military service, attractiveness of business and other professional callings, and prognostications to the contrary, medical schools will probably graduate 30 per cent more physicians in 1960 than they did in 1950. Popu-

lation shifts and growth will thus be covered and our standards maintained.

The people of America and all men and women of our profession cannot forget that the greatness of American medicine has sprung from the same freedom that has made America great!

◆ ◆ ◆

Infectious Hepatitis

ATTENTION is being focused upon homologous serum jaundice, infectious hepatitis, and virus hepatitis. Reports do not make it clear whether they are all the same malady but, no matter what you call it, the victim looks and feels like the pumpkin a week after Hallowe'en. For a considerable period of time, too.

There seems to be a prolonged incubation and prodromal period characterized by such symptoms as malaise, headaches, backache, anorexia, nausea, constipation, and bile in the urine before the jaundice develops to make the patient look nearly as sick as he feels. It is then that he finds himself out of circulation while his physician debates whether it is obstructive, infectious, catarrhal, or just inflammation of the hep. History, physical findings, and the blood chemistry settle the matter except for the patient. He then yields to rest in bed, high carbohydrate high protein low fat diet, laxatives, bile substitutes, vitamins (especially the various Bs), scratching the cutaneous biliousness if it doesn't draw more than a small amount of blood, and the passage of time—infinite time. Seems that viruses and the antibiotics just love each other and there's no use taking them and starting up any more symptoms!

It is probably more than a coincidence that the disease has become more frequent with increased use of blood and plasma transfusions. A recent issue of J.A.M.A. reports sixteen cases among medical personnel in four hospitals in Memphis during a period of three years. There is ample evidence that it is an occupational hazard among the handlers of blood and, as such, it should be compensable in cases where its source is reasonably certain. Pathologists sometimes handle livers with bare hands; they and the chest surgeons scratch fingers on cut ribs; all of us stick fingers with needles, and we get blood on our hands from wounds and dressings. Only minute amounts of infected blood or serum are necessary to transmit the disease. It has been done experimentally with as little as .01 c.c. of infected material; epidemics have occurred in clinics for syphilis and diabetes; a tattooing needle apparently carried it to four men. In two years nine cases occurred among nurses of the emergency room in one hospital. Surely there is far more evidence of transmission in the above ways than through food or water, like typhoid fever.

Several factors have to do with insidious appearance and transfer of the disease—long incubation period, indefinite prodromal period, prolonged if not indefinite viability of the virus, small amount of infected material required for inoculation, possibility of carriers, and frequency of small puncture wounds, cuts and abrasions among all of us who handle blood. What then should we do about it? Workers who handle blood should avoid getting it on their hands. All instruments used for penetration of skin should be adequately sterilized, preferably by heat.

Finally, we believe that donors of blood should always be questioned about whether they have ever been jaundiced. If they have and its cause was not proved to be non-infectious, they should be turned down as donors. Their sclerae should be inspected. The disease warrants more respect than it has received. Ask the patient who has it, stand back when you ask the man who has it, and take every precaution yourself to avoid becoming an authority upon hepatitis the hard way!

Original Articles

MENOPAUSAL SYNDROME TREATED WITH ALPHA-TOCOPHEROL*

REPORT OF TWO CASES AND REVIEW OF LITERATURE

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MINNEAPOLIS, MINN.

Patients with a severe menopausal syndrome in whom estrogen therapy is contraindicated present a problem in management. Sedatives often do not give satisfactory symptomatic relief. One of the recently reported approaches to this problem is the use of alpha-tocopherol.

Previous clinical reports of use of vitamin E in therapy of menopausal syndrome are summarized in Table I. After presenting their four cases, Hain and Sym thought that further trial of this type of therapy was indicated. They made the suggestion that a vascular, rather than an endocrine, factor may be the common denominator in estrogen and vitamin E therapy. Christy reported the first sizable series of cases. He believed larger doses than he had used might increase the number of patients who were completely relieved, and Kavinoky's results tend to verify this. She tabulated symptoms separately, checking them every two weeks, and found that 100 mg. was more effective than 50 mg. of Ephynal acetate in giving complete relief or improvement in each symptom. In Kavinoky's series those who obtained relief from menopausal symptoms on this therapy usually did so within the first two weeks.

Reference to Table I shows that 365 cases have now been reported and approximately two out of three patients were relieved while on treatment. All workers have agreed that there are no possible carcinogenic results. Several workers have indicated that certain patients seem to do better on vitamin E and others seem to be best served by estrogen therapy. Finkler's series is particularly helpful in that she showed that symptoms recurred in a significant percentage of cases upon cessation of therapy or upon substitution of placebo medication.

McLaren has reported the only three cases of side effects and it should be noted in this connection that he used much larger doses than other workers. One of his patients developed a severe dermatitis which made it necessary to discontinue treatment after the use of 36,640 mg. alpha-tocopherol in sixteen weeks (average 327 mg./day). Two of his post-irradiation patients menstruated after 5.4 gm. and 14.0 gms. vitamin E, respectively, one having a hemorrhagic luteal cyst.

CASE REPORTS

Case 1: Miss E. E. M. was a poorly nourished woman 41 years of age whom we saw in June and July, 1949. She had been on a greatly restricted diet for many months and had neuritic pains in the legs, joint pains, angular cheilosis and gingivitis. These symptoms subsided on therapy with vitamins B and C, but she continued to be tired and nervous and had hot flashes. She was on the verge of tears when seen in the office. Her mentrual periods were still fairly regular. Menopausal syndrome had been diagnosed by another physician in the summer of 1948 and a prescription for oral estrogen given. The patient did not secure the medication until June of 1949 and had used it one week without improvement. Preparation and dosage are unknown.

Upon physical examination breasts were normal. Pelvic examination showed a very red, ulcerated and slightly raised lesion surrounding the cervical os. Vaginal smears showed 4 plus estrogenic activity and no neoplastic cells were recognized. Because of the cervical lesion, we were completely unwilling to use further estrogen in therapy and she was advised to use Ephynal acetate* 50 mg. twice a day by mouth. Six days later she was definitely more calm, objectively and subjectively, and said, "I'm almost my normal self." This was in spite of the fact

*From the Student Health Service, University of Colorado, Boulder, Colorado. Author's present address: Student's Health Service, University of Minnesota, Minneapolis, Minn.

*Ephynal acetate is a preparation of alpha-tocopherol supplied in 50 mg. capsules through the courtesy of E. L. Sevringhaus, M.D., Director of Clinical Research, Hoffmann-La Roche, Inc., Nutley, N. J.

TABLE I
Summary of Previous Clinical Reports

Worker	Date	No. Pts.	No. With Marked Relief	Mg. a-tocopherol qd (os)	Side Effects	Effects on Vag. Smears
Hain and Sym[1]	1948	4	3	6-12		
Christy[2]	1945	25	23	10-30	0	no change (few cases)
Rubenstein[3]	1948	17	14	75		min. cornification 30 da.
Ferguson[4]	1948	66	66 (5 mo.)		0	no change
Finkler[5]	1949	66	31	20-100; av. 30	0	no change (45 cases)
McLaren[6]	1949	47	30	av. 500	few (see text)	6 of 36 showed some maturation
Kavinoky[7]	1950	59*	37	10-25	0	
		17†	10	50	0	
		64†	48	100	0	
Total		365	240			

*Group with vasomotor symptoms.
†Patients reporting hot flashes.

that she was having final examinations and had been told of the suspicous cervical lesion and referred for study by a gynecologist as soon as school had ended. Biopsy was subsequently reported "cervical papillomata showing chronic inflammation." The gynecologist also felt that the climacteric symptoms had been well controlled by the a-tocopherol.

Case 2: Miss A. L. M. had had a panhysterectomy in 1947 because of uterine fibroids. There was no indication of neoplasm but her brother, a surgeon, was opposed to the use of estrogen in her case. When we saw her in July, 1949, she was an overweight, nervous 51-year-old woman who complained of hot flashes, weak legs, palpitation, vertical headaches, and a choking sensation. She said that it seemed as though the blood was shooting to her head. Breasts were normal on physical examination. Pelvic examination was not done. She felt definitely better after three intramuscular injections of 100 mg. of Ephynal* daily, but was unable to maintain the improvement when taking the oral preparation 50 mg. twice a day. We are opposed to long-continued parenteral therapy, particularly with oily preparations and especially when oral therapy is effective, as in the menopausal syndrome. It then came to our attention that she had had cholecystectomy in 1948 because of cholelithiasis and for a few months before we saw her she had neglected to take the recommended bile salts. She was advised to resume their use three times a day (Ketochol grains three and three-fourths) and to continue the use of Ephynal acetate 50 mg. by mouth twice daily. Three days later she felt better and seven days after that she felt very well and continued to feel so. She returned in August to her home state to teach and at our advice continued the a-tocopherol orally until September 30. By October 12 her previous symptoms had definitely returned and she resumed therapy. By October 30 the symptoms were considerably less annoying and she said, "It is my opinion that the vitamin E has been of benefit to me."

*Ephynal is d, l alpha-tocopherol in sesame oil for injection, also supplied by Hoffmann-La Roche.

Discussion

Review of the literature in an effort to understand the mechanism of action of vitamin E in these cases allows us to make no conclusions. It is known that vitamin E deficiency in the male rat is followed by irreversible testicular atrophy and "castration cells" in the anterior pituitary. Female rats so deprived are able to initiate pregnancy but fetal resorption occurs early. Later addition of vitamin E to the diet allows subsequent pregnancies to go to term. These observations suggest an endocrine effect by vitamin E but further experimental results are at marked variance as to what effect might be.[8 9 10 11 12]

Various workers have concluded that vitamin E imitates or is a precursor for gonadotrophic hormones, or estrogen, or progesterone. Mattill[9] presented a careful review of the literature to 1938 and was not convinced of the endocrine effects of vitamin E. Drummond et al.[12] did a series of experiments on male and female rats using the tools of vitamin E deficiency, hypophysectomy, and treatment with preg-

nant mare's serum. They concluded, "The suggestion that the effects of vitamin E deficiency are produced by a hormonal imbalance is not supported by the experimental evidence described."

Recent articles report that vitamin E does not have an estrogenic effect in rats[13] or humans,[4 5] and that its relation to progesterone is through an effect on the intermediary metabolism of that substance.[14] Watteville et al. reported that ten postmenopausal women treated by injections of progesterone showed a highly significant increase in the excretion of urinary pregnanediol when dl-a-tocopherol was added. The authors stated that these test subjects could not have produced more progesterone but that there was a shift in the intermediary metabolism of progesterone in favor of pregnanediol production, interpreted as due to the antioxidative effect of a-tocopherol.

Summary

Two cases have been reported in which severe menopausal symptoms were controlled by the use of alpha-tocopherol in cases where estrogen therapy was believed contraindicated. Review of the literature shows that 365 cases so treated have now been reported with about two out of three patients being markedly relieved. The mechanism of this control of symptoms is obscure. Vitamin E does not have estrogenic effects in rats or humans. Further evidence as to its possible endocrine effects is contradictory, and there is considerable opinion that the effects of vitamin E are not mediated through hormonal mechanisms.

Conclusions

1. Alpha-tocopherol controls symptoms in two out of three cases of menopausal syndrome.

2. Alpha-tocopherol is a safe medication and should be considered in cases with contraindications to the use of estrogens.

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POSTGRADUATE COURSE ON PSYCHIATRY

The third annual postgraduate course on Psychiatry for the General Practitioner will be offered at the University of Colorado Medical Center on July 26, 27, 28, 1951. This two and one-half day course aims to present prevalent psychiatric concomitants in general practice with emphasis on psychotherapy. The practical nonspecialized aspects of psychiatry in general medicine will be emphasized.

Dr. Burtrum C. Schiele, Professor of Psychiatry at the University of Minnesota, will be the guest lecturer. The teaching staff will include twenty-four members of the faculty of the University of Colorado School of Medicine.

This course is open to all doctors of medicine, but general practitioners will be given preference. The registration fee will be $5.00 and tuition will be $15.00. Further inquiries and applications may be made to the Office of the Director of Graduate and Postgraduate Medical Education, 4200 East Ninth Avenue, Denver 7, Colorado.

SEROLOGICAL SAMPLING FOR HUMAN BRUCELLOSIS IN NEW MEXICO*

LORA MANGUM SHIELDS and MYRLE BOGGESS
LAS VEGAS, NEW MEXICO

A preliminary survey has been made of the incidence and localization of human brucellosis infections in New Mexico. The number of reported cases of human brucellosis in the United States from 1940 to 1946 steadily increased from 3,310 to 5,049 per year except for a slight drop in 1942. While a total of 27,299 cases, with 547 deaths, was reported during this six-year period, the incidence of chronic brucellosis is probably much higher than this figure implies†. Because ranching is one of the leading industries in New Mexico, and a porportionately large quantity of raw milk is consumed in this state, a higher brucellosis incidence than the national average per 1,000 population might be suspected.

An attempt was made to secure blood samples from a cross section of New Mexico's population whose environments might have afforded an opportunity for brucellosis infection through occupational risks or the consumption of raw milk. The ten district health officers in New Mexico were contacted for blood samples from persons who showed symptoms of the disease, who drank unpasteurized milk, handled raw meat, worked in dairies or on dairy farms, or raised cattle, particularly those who worked among herds where cows had aborted recently. Tests were made on the sera of 150 inmates of the State Hospital for the Insane because of the mental symptoms associated with chronic brucellosis and because cases found among these persons representing many different sections of the state might point to localized foci of infection. Samples were also collected from a number of suspected brucellosis victims in local hospitals and from persons in several small, isolated villages in northeastern New Mexico. Five c.c. blood samples in sterile tubes brought or mailed directly to the laboratory were tested by the rapid slide agglutination method, using Pittman-Moore brucella antigen in the five recommended dilutions of antigen and serum, respectively: 1 to 25, 1 to 50, 1 to 100, 1 to 200, and 1 to 400.

Complete agglutination in a dilution of 1 to 100 constitutes a positive reaction, and agglutination in a titer of 1 to 400 or higher, in the presence of symptoms, is presumptive evidence of the disease. A positive titer in lower dilutions results from a previous infection or sensitization from exposure to infective materials. A negative test, indicating absence of agglutinins in the blood, may occur in occasional cases of infection. The antigenic reaction is not conclusive, since the patient's history and symptoms must also be considered in making a definite diagnosis.

The rapid slide agglutination test for brucellosis was made in the spring and summer months of 1950 on the sera obtained from sources indicated in Table 1. A number of health districts could not supply blood samples because requests for specimens were made in the late spring at about the time the public schools closed for the summer, and nursing staffs were reduced or occupied with other responsibilities during the school vacation.

Thirteen of the 310 sera agglutinated in one or more of the five dilutions. Of the thirteen positive reactions, amounting to 4.19 per cent of the total number of tests made, the number of samples agglutinated at each dilution is shown in Table 2. The seven persons giving agglutination in a 1 to 100 dilution of antigen and serum, respectively, would be considered reactors. As no samples agglutinated in dilutions of 1 to 400, none of the cases was actively infectious, and for this reason no attempt was made toward primary isolation of the casual organism. Among the samples negative in all dilutions was one from a Carlsbad patient diagnosed in June, 1947, as having undulant fever and who subse-

*From the Dept. of Biology, N. M. Highlands University, Las Vegas, N. M.

†Nation Wide Program Proposed to Control Brucellosis. The Diplomate, 22:16-17. 1950.

TABLE 1
Sources of Blood Samples Tested With Brucella Antigen

Health Dist.	Counties in District	Patients in St. Hosp. for the Insane	Samples from Dist. Health Off. or taken directly	Negative	Total Samples Tested	Positive in any dilution
No. 1	Rio Arriba	3	0	3	3	0
	Santa Fe	7	0	7	7	0
	Taos	2	0	2	2	0
No. 2	McKinley	3	20	23	22	1
	San Juan	5	0	5	5	0
No. 3	Bernalillo	20	13	33	32	1
	Sandoval	1	0	1	1	0
No. 4	Dona Ana	8	50	58	56	2
	Lincoln	0	0	0	0	0
	Otero	3	0	3	3	0
	Sierra	0	0	0	0	0
No. 5	Guadalupe	3	0	3	3	0
	Mora	0	1	1	1	0
	San Miguel	13	48	61	58	3
No. 6	Chaves	6	0	6	6	0
	Eddy	2	17	19	15	4
	Lea	2	0	2	2	0
No. 7	Grant	1	0	1	1	0
	Hidalgo	0	0	0	0	0
	Luna	1	1	2	1	1
No. 8	Catron	0	0	0	0	0
	Socorro	1	0	1	1	0
	Torrence	1	10	11	10	1
	Valencia	5	0	5	5	0
No. 9	Colfax	4	0	4	4	0
	Harding	1	0	1	1	0
	Union	1	0	1	1	0
No. 10	Curry	4	0	4	4	0
	Quay	2	0	2	2	0
	DeBaca	0	0	0	0	0
	Roosevelt	3	0	3	3	0
County not known		48	....	48	48	0
Totals		150	160	310	297	13

quently received two weeks of treatment. On the other hand, one person whose serum was positive in the first four dilutions claims to have contracted brucellosis thirty years previously.

The only known recent case of *Brucella abortus* infection appearing in cattle in San Miguel County was in a diseased cow imported from another state. Similarly, the outbreak of human brucellosis in the vicinity of Carlsbad and Estancia in recent years followed the introduction of diseased cattle.

Special acknowledgment is due the following district health officers and other medical personnel in each district who willingly cooperated in supplying blood samples:

1. E. B. Beaver, M.D., Health Dist. No. 2, and Roberta Arnold, R.N., Gallup.

2. F. C. Diver, M.D., Health Dist. No. 3, and Bessie Morse, Supervising Nurse, Albuquerque.

3. R. G. M. Ehlers, M.D., Health Dist. No. 4, and Mary Ellen Riddle, P.H.N., Las Cruces.

4. J. R. Wright, M.D., Health Dist. No. 5, and Helen Lossuf, P.H.N., Las Vegas; Ruth Jordan, Superintendent of Nurses, Las Vegas Hospital; Dr. M. McCreary, M.D., and Maxine Sandoval,

TABLE 2
Sources of Sera Showing Agglutination

Patient	Address		Dilutions in which agglutinated	Remarks
	Town	County		
D. C.	Ramah	McKinley	1-25, 1-50	Drinks raw milk, lives in ranching community, shows symptoms
B. R.	Albuquerque	Bernalillo	1-25, 1-50, 1-100	Drinks raw milk, is dairy employee
E. R.	Carlsbad	Eddy	1-25, 1-50	None
T. T.	Carlsbad	Eddy	1-25, 1-50, 1-100, 1-200	Diagnosed as having brucellosis in 1947 by Dr. A. Schuler
G. A. M.	Carlsbad	Eddy	1-25, 1-50, 1-100, 1-200	Brand inspector and dairyman. Contracted brucellosis 30 years ago. No symptoms at present
B. B.	Carlsbad	Eddy	1-25	Diagnosed as having brucellosis in 1946 by Dr. A. Shuler
T.	Las Cruces	Dona Ana	1-25, 1-50	Employed in milk laboratory
D. L.	Las Cruces	Dona Ana	1-25, 1-50, 1-100	Milker
T.	Estancia	Torrance	1-25	Has had no known contact with infectious materials
B. M. S.	Deming	Luna	1-25	Owns and tends cows, currently shows symptoms
No. 1	Las Vegas	San Miguel	1-25, 1-50, 1-100, 1-200	Positive Wasserman
No. 2	Las Vegas	San Miguel	1-25, 1-50, 1-100	Positive Wasserman
No. 16	Montezuma Seminary	San Miguel	1-25, 1-50, 1-100	Contracted brucellosis in Spain before coming to this country

R.N., both on the staff of the State Hospital for the Insane, Las Vegas.

5. O. B. Puckett, M.D., Health Dist. No. 6, Carlsbad.

No blood samples were collected from Indian reservations since the diagnosis of a positive case of brucellosis has not been reported in recent years among any of the Pueblo Indians[1], and there being only four milk cows on the entire Navajo reservation practically eliminates the probability of brucellosis in this area, although some of the Hopi people around Keams Canyon do use a certain amount of goat's milk[2].

The next series of tests will be made on the sera of the population of the goat raising districts of northeastern New Mexico.

[1]Knudtson, H. M., M.D., Chief Medical Officer, United Pueblo Agency, Albuquerque. Personal letter to L. M. Shields, July 21, 1950.

[2]Hedges, C. C., M.D., Chief Medical Officer, Window Rock, Arizona. Personal letter to L. M. Shields, July 28, 1950.

Summary

Thirteen human sera from 310 selected blood samples, collected from suspected or possible victims of brucellosis in different parts of New Mexico and tested with the Pittman-Moore Brucella antigen, agglutinated in the following dilutions:

Titer	Number of serum samples agglutinating at this dilution
1-25	13
1-50	10
1-100	7
1-200	3
1-400	0

No samples reacted positively at a dilution which would indicate active infection (1 part antigen to 400 quarts serum). The seven persons whose sera agglutinated in the 1 to 100 dilution would be considered

reactors. Compared to the slightly more than 5,000 cases of brucellosis recorded per year in the United States, the incidence of this disease in New Mexico is lower than might be expected in an area where cattle raising is the leading industry and relatively large quantities of raw milk are consumed.

OPHTHALMOLOGIC URGENCIES AND EMERGENCIES*

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Looking over the program of this meeting with all the major medical issues which are up for discussion, the ophthalmologist can't help feeling very small and insignificant, in person as well as the representative of his specialty. But every so often it is probably a good thing to feel small.

As ophthalmologic urgencies and emergencies I would like to define situations in the realm of human illness in which the final outcome is much more dependent upon the promptness with which treatment is instituted rather than upon the special skill and experience of the doctor who administers it. Putting it somewhat differently, awareness of the existence of ophthalmologic urgencies can be more helpful and more beneficial than the knowledge of all the intricate details of the anatomy, physiology, and pathology of the eye. To have recognized the urgency can be a greater contribution to the final cure than all the highly specialized technics used by the ophthalmologist.

Congenital, or infantile glaucoma, is an ophthalmologic urgency. It has become firmly established that in the normal human eye a steady stream of fluid proceeds through the chambers of the eye at the rate of about 3 cmm. a minute. The direction of this stream is from the ciliary body to the angle of the anterior chamber where an intricately constructed outlet drains aqueous humor out of the eye and into the blood stream. Prenatal disturbances in the development of this outlet may interfere with its normal function and give rise to congenital or infantile glaucoma, the most conspicuous manifestation of which is abnormal growth and enlargement of the eyeball. The accumulation of fluid in the chambers of the eye causes an elevation of the intraocular pressure under the influence of which the wall of the eyeball stretches and grows more rapidly than normally. This increase in volume, however, cannot make up for the lack of an outlet for intraocular fluid. The pressure remains elevated, very much to the detriment of the retina and optic nerve which gradually become atrophic, and of the cornea which turns cloudy. Except for its latest stages the disease is painless and is not characteristically associated with other malformations. The parents often remain unaware of the serious pathologic nature of the condition, interpreting it as strikingly or beautifully large eyes. Most of these actually are diseased eyes, of which diseased condition even the most unsuspecting parents become convinced when the cornea turns cloudy or steamy.

Through the persistent systematic work of Otto Barkan, in San Francisco, a fairly simple brief surgical procedure has been developed which, while it may have to be repeated a number of times, brings about normalization of the intraocular pressure in three out of four cases. This percentage of success is very strikingly better than the results obtained with any of the older methods. I would call it a revolutionary improvement in the treatment of infantile glaucoma. Each surgical procedure requires about fifteen to twenty minutes of general anesthesia and entails practically no limitation of activities afterwards. A large pair of eyes in an infant, especially if one or both corneas seem cloudy, calls for prompt institution of surgical treatment which, as

*Read before the Annual Meeting of the Montana State Medical Association, July 11, 1950. From the Department of Ophthalmology, University of Illinois.

in all cases of glaucoma, cannot restore what vision has been lost but is likely to retain the visual status quo.

A case of persistent unilateral strabismus also represents an ophthalmological urgency. The mechanism of the disturbance may be complicated and require long study and observation which fact is often construed to be a valid reason for deferring action until the child is older and more cooperative. Unfortunately, the visual sensations perceived by the squinting eye interfere with the visual sensations perceived by the fixing eye. To eliminate this annoying interference the cerebral process of suppression is called into action which, if maintained in long periods, seriously hinders the normal visual development of the squinting eye. As a result of this, the squinting eye becomes a stepchild in the true sense of the word and fails to attain normal visual capacity. In brief, it becomes amblyopic. Promptly instituted treatment in the form of occlusion of the fixing eye, which is applicable to infants of any age, can break up the suppression mechanism and enable the squinting eye to participate actively in the conscious visual process, to derive from these processes the proper stimulation and training and to grow up into a good strong normal eye. The cases most likely to develop amblyopia are the strictly monocular squints which, therefore, are much more of an ophthalmologic urgency than the so-called alternators. It does not require much time or special skills of observation to determine whether a squint is monocular or alternating. This determination gives the answer to the question of whether treatment is necessary because of the danger of unilateral amblyopia or whether it is just advisable for the correction of a slight blemish.

With regard to injuries to the eyeball, the distinction between perforating and nonperforating ones is still of utmost importance. Perforating injuries are more serious because (1) they entail the danger of intraocular infection; (2) they entail the danger of retention of an intraocular foreign body; and (3) they entail damage to the deeper, more delicate structures of the eye.

Dangers 1 and 2 do not exist at all in the nonperforating injuries, and danger 3 to a lesser extent. The differentiation between perforating and nonperforating injuries is made on the basis of the eye findings and of a careful analysis of the circumstances under which the accident occurred. The perusal of crime and detective stories, I believe, is a good introduction to the type of mechanical thinking that one has to do in trying to unravel the mechanics of an injury as related to us by the patient. The clinical signs of perforation can be very gross and unequivocal in some cases and very inconspicuous and almost microscopic in others. It is good to remember the latter ones because they are most easily overlooked. They are inflicted characteristically by small sharp metallic or stone splinters that strike the eye with great force. There again the history can be of great value.

Having made the diagnosis of a recent perforating injury it becomes our responsibility to administer with the shortest possible delay adequate doses of antiinfective agents. Because of the peculiar anatomic structure of the human eye it is not permissible to wait for definite signs of a posttraumatic intraocular infection. The same reasoning that causes us to administer antitetanus serum in any case of deep, soil-contaminated skin laceration orders us to use antiinfective agents in every recent perforating injury irrespective of whether or not signs of an infection are present. Since bacteriologic findings are usually not available when the diagnosis of perforation is first made, the antiinfective treatment should be all-inclusive. The writer advocates one single large dose of penicillin applied subconjunctivally plus the oral administration of a large dose of triple sulfonamides or of gantresin. After that has been done the responsibility of the general practitioner usually ends. If the perforation is large it usually requires plastic repair which, as well as the removal of intraocular bodies, will have to be left to the ophthalmologist. Again the recognition of

the perforating character of the injury and the initial dose of antiinfective agents may contribute more toward a favorable outcome than the most skillful plastic repair of the operative wound performed by the ophthalmologist.

Blunt injuries or contusions of the eyeball are inflicted by relatively large, blunt, often round objects. During the impact the eyeball wall is stretched and its contents are badly shaken up. In some of these injuries the mechanical stress is so great that the eyeball wall ruptures. These injuries are very serious and deserve the same considerations as perforating ones.

In the more common, milder cases the eyeball wall stretches sufficiently to allow for the deformation caused by the impinging object, and intraocular hemorrhages of varying extent are the only gross eye finding a few hours after the injury. A great deal of discussion has been devoted to the question of whether such cases with a lot of blood in the anterior chamber should be treated with atropine or eserine. In my experience treatment with drugs is of far lesser importance than complete rest for several days to a week, since there is a strong possibility of recurrences directly related to physical activity. The patient with a contused partly blood filled eye should be treated just like the patient with a concussion or a suspected fracture of the skull.

Not enough can be said about the number one emergency in ophthalmology, the acute congestive glaucoma. It is an urgency and emergency both in the sense that every hour of delay means a definite amount of permanent visual loss and also in the sense that the disease in its early phases is extraordinarily amenable to treatment which in your hands should consist of a powerful, readily available miotic such as eserine ointment topically every one-half hour. If there is no decided improvement after six hours of such treatment the case becomes a surgical one, and this surgery should be advised, insisted upon and carried out with the conviction that early acute congestive glaucoma is one of the few eye diseases in which treatment is effective is more than 90 per cent of the cases.

The diagnosis is rendered difficult in the not too infrequent cases in which the systematic symptoms overshadow the local disease. The vomiting, dehydration and subjective sensation of being very, very sick can easily lead us astray if we neglect to take one look at the patient's eyes which, in the case of acute congestive glaucoma, will show a very gross pathologic picture, namely a congested eye, a steamy cornea, a fairly wide pupil, a shallow anterior chamber and a very high tactile tension. To the examiner's question, "Why didn't you tell me about your eye?" the patient will usually reply that he thought that to be minor compared with "his main sickness." Quite a few more ophthalmologic urgencies could be mentioned here, but I shall consider my mission as accomplished if you will remember the congenital glaucoma, the unilateral strabismus, the perforating and nonperforating injuries and the acute congestive glaucoma.

Book Reviews

Physiology of the Eye Clinical Application: By Francis Heed Adler, M.A., M.D., F.A.C.S.; William F. Norris, and George E. de Schweinitz, Professor of Ophthalmology, School of Medicine, University of Pennsylvania, and Consulting Surgeon, Wills Hospital, Philadelphia. With 319 illustrations, including two in color. St. Louis: The C. V. Mosby Company, 1950. Price, $12.00.

Adler's Physiology of the Eye is not a revision of the author's previous text but is an entirely new treatment of the subject of ocular physiology. The stress has been placed in this volume on the clinical application of ocular physiology, and throughout there are many pointed clinical suggestions of merit. Recent research and accepted physiology are correlated into a readable concise explanation of the present status of many controversial points in present day ophthalmology. The section of the book concerning aqueous humor formation and the control of intraocular pressure is written with a clarity which should add much to general understanding and unity of thought in a field of ophthalmology which has been and is the subject of much debate. The extraocular muscles are described in great detail, but the essence of the material is highlighted with sufficient clinical suggestion and application to make the text both intelligible and interesting. This book most certainly adequately replaces its predecessor, and because of its value to student and practitioner of ophthalmology alike it becomes "must" reading for every ophthalmologist.

E. J. SWETS, M.D.

THE USE OF DIHYDROERGOTAMINE METHANESULFONATE (DHE-45) IN SHORTENING LABOR*

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The therapeutic activity of the various components of the active alkaloids of ergot remains undisputed in obstetrics and much credit is due Stoll[1] and Hofmann[2], who have pioneered in the chemistry of the ergot alkaloids. Reynolds, Hellman and Bruns[3] state that to dilate the cervix, intermittent contractions of the fundus must be strong and they must rise quickly to a maximum and must be of relatively long duration. In contrast, in the mid-portion of the uterus, the contractions are less intense, they are usually shorter in duration and frequently diminish in force as labor progresses. These workers add that the cervical dilatation is the result of a gradient of diminishing physiologic activity from the fundus to the lower uterine segment and that the functional components of this activity are the intensity and the duration of the contractions. In uterine inertia the contraction pattern in the uterus deviates from this simple effective pattern.

Dihydroergotamine methanesulfonate (DHE-145) is a chemically pure compound resulting from the hydrogenation of the natural ergot alkaloid, ergotamine (Stoll and Hofmann)[2]. It is less toxic than ergotamine. This has been proven by Horton, et al.[4], Hartman[5], Friedman and Friedman[6], Danenberg[7], and Pollock[8]. Large daily doses given to rats for a period of one month did not produce the characteristic sign of ergotism, i.e., necrosis of the tail. DHE-45 is being used for the treatment of migraine where it is as effective as ergotamine without producing some of the side effects.

The use of DHE-45 (dihydroergotamine methanesulfonate) in obstetrics is rather recent. Sauter[9], in 1948, used the drug for cervical spasm. He reported forty-three cases treated with DHE-145, using injections of 0.25 mg. Complete relaxation of the cervix was obtained in all cases in one to two hours. This was accompanied by a reduction in the basal tonus as measured by Frey's Hysterotonograph. There was no influence on the rhythm and maximum intensity of the contraction. This was confirmed by Reist[10], who reported its use in fifty cases.

In a previous report[11] we presented our findings with dihydroergotamine in fifty consecutive primiparous cases and fifty primiparae were used as controls. When DHE-45 was employed, all pelves were found to be normal and all were checked by x-ray measurements. There were no cases of disproportion and DHE-45 was only administered when the cervix was 5-6 cm. dilated, which was checked by vaginal examination. It was concluded that DHE-45 is a safe and effective agent for producing relaxation of the cervix, that the average time to complete dilatation of the cervix is lessened and that there were no side effects such as rise in blood pressure, no fetal anoxia, no retained placenta and no postpartum hemorrhage. The average time of the first stage of labor in the control series was 13 hours and 14 minutes and in those cases which received DHE-45 intravenously in one milligram doses, the average time of the first stage was 7 hours and 54 minutes. The average labor in the control series was 15 hours and 42 minutes, while in the DHE-45 series it was 8 hours and 24 minutes.

We were prompted to make further observations with DHE-45 because of the encouraging results we received in the earlier series[11]. This communication deals with the use of DHE-45 in 100 multiparous patients. Our procedure was the same as employed in the first series, i.e., 1 c.c. of DHE-45 containing one milligram was injected intravenously and if the patients had no previous sedation, 50 milligrams of demerol was then given by vein. In our experience we found that the injection of one milligram of DHE-45 may, in some cases,

*Presented at the 80th Annual Session of the Colorado State Medical Society at Colorado Springs, September 21-23, 1950.

produce intestinal cramps, which was controlled by this sedation.

Following delivery, methergine, a chemically pure partially synthetic ergonovine derivative, was injected intravenously with delivery of the head and was previously described by one of us[12 13]. Methergine was found to have a more pronounced and sustained effect on the uterus than natural ergonovine.

Following the injection of DHE-45 in these cases, the pain interval was shortened, there was no elevation in blood pressure and there were no cervical tears. It is believed that cervical tears are less likely to occur because of the relaxation of the cervix. As in our first series, there were no cases of fetal anoxia, no retained placenta and no postpartum hemorrhage.

The average time of labor before the administration of DHE-45 was 4 hours and 27 minutes. The average time for complete dilatation was 14 minutes. The average time in this series for the first stage of labor was 4 hours and 41 minutes and the average time for the second stage was 16 minutes. The average time for the third stage was 3.2 minutes. The use of methergine, 1 c.c. intravenously, in most cases as the head was born, may account for the shortening of the third stage.

CASE REPORTS

Case 1. M.M., aged 22, primipara. Pelvis was normal and prenatal course normal. Patient was in labor 10 hours and 15 minutes to a dilatation of 8 cm. Progress was stationary then for 2 hours. The position was ROT, spines plus 1, cervix thick. The pains were every three minutes and membranes had ruptured. One c.c. of DHE-45 was then injected intravenously and dilatation was complete in 15 minutes. The second stage was then completed in 21 minutes. Premedication included demerol and scopolamine.

Case 2. T.W., aged 24, primipara. Pelvis was normal and the prenatal course was also normal. Patient had been in labor 13 hours and 35 minutes to a dilatation of 5 cm. The position was LOA. There had been no progress for two hours. DHE-45 plus 50 mg. of demerol was then given intravenously. Patient was complete and crowning in 20 minutes.

Case 3. M.W., gravida 5. Patient had been in labor 9 hours and 10 minutes to a dilatation of 7 cm. The cervix was thick. Pains were every three minutes. Head was at the spines. The membranes had ruptured and there had been no progress for one hour. One c.c. of DHE-45 was then injected intravenously. Dilatation was complete in 17 minutes and patient was delivered 1.5 minutes later.

Case 4. A.R., aged 29, para 2, at term. Patient had a moderately severe toxemia. The blood pressure 165/110. Albumin was 2-plus and the edema was 2-plus. Patient was treated conservatively for 24 hours with magnesium sulfate and 20 per cent glucose with no improvement. Membranes were ruptured surgically and patient was in labor four hours to a dilatation of 6 cm. The cervix was thick and pains were every four minutes. One c.c. of DHE-45 plus 50 mg. of demorol were injected intravenously. Patient was then complete in 18 minutes and delivered under Saddle-Block anesthesia with low forceps. In this case the first stage was 4 hours 18 minutes, the second stage was 20 minutes and the third stage three minutes.

Case 5. T.W., aged 33, para 2, at term. Position LSA, complete breech. This patient was in labor 4 hours 10 minutes to a dilatation of 6 cm. Pains were every three minutes. The cervix was thick. One c.c. of DHE-45 plus 50 mg. of demerol were injected intravenously. Patient was complete in 18 minutes and delivered spontaneously 22 minutes later. The third stage was three minutes.

Case 6. M.T., aged 28, primipara. This patient had been in labor 16 hours to a dilatation of 6 cm. Pains were every three minutes, the cervix was thick and head was at spine plus 1. Pains became weak and lasted 20 seconds. Membranes were intact. Patient was taken to delivery room and 1 c.c. of DHE-45 was injected intravenously. There was no change in the dilatation in 50 minutes. She was returned to her room and was complete and crowning in 30 minutes. This case demonstrates the fact that DHE-45 does not increase or produce contractions of the uterus and that progress depends on uterine contractions.

Discussion

We have also employed DHE-45 in several cases of secondary inertia and we observed that normal pains were established which is especially true if there is emotional stress. Kaiser and Harris[14] show that the disorganization of patterns of uterine activity observed in inertial labor resembles that induced by exogenous adrenalin. The injection of adrenalin causes a diminution of uterine activity and emotional stress produces an increased secretion of adrenalin with resulting inertia. In one of our cases, because of fear, the patient had irregular and weak pains. DHE-45 was given to this patient intravenously in the room and she was immediately taken to the delivery room and was delivered on the cart. It is believed that DHE-45 in these cases acts by inhibition of adrenergic impulses and has no direct muscular action.

Conclusions

1. DHE-45 given intravenously is effective in producing rapid dilatation of the cervix.

2. Shortening of labor is accomplished without complications.

3. DHE-45 was found of value in secondary inertia.

4. DHE-45 as used here is safe and produces no side effects.

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GUIDEPOSTS IN CONTROL AND PREVENTION OF RABIES*

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A mounting epidemic of rabies in the four-county Denver metropolitan area was conquered in March, 1950, by concerted action for mass immunization of dogs at temporary clinics during a five-day period. The success of the drive, of increased immunizations at private veterinary establishments, and of the intensified collection of strays exemplifies what can be accomplished by joint efforts of public, professional, and voluntary organizations when an emergency threatens public safety. If there is understanding of the importance of continuous, effective preventive measures and full cooperation in their unrelaxing application, such an outbreak need never recur in the state. If, on the other hand, negligence prevails, serious menace again may arise. Protection against the inroads of rabies or of other preventable infectious diseases, such as smallpox, diphtheria and whooping cough, can be assured only when immunization is adequately maintained.

Course of the Denver Metropolitan Area Epidemic

The area involved in the epidemic included the City and County of Denver and the nearer populous parts of the surrounding counties of Adams, Arapahoe, and Jefferson. The latter three counties are served by the Tri-County Health Department, and Denver's health programs are administered by its Bureau of Health and Hospitals. The emergency program undertaken to combat the rabies crisis well illustrates the interrelated functions and service goals of state and local health departments working in conjunction with other government agencies and professional and civic groups.

The rabies menace first emerged in Adams County in 1949 when three dogs and a cat were found to be rabid in July and August, respectively. No additional cases were revealed in September or October, but in November there were eight in Denver and one in Adams County. After a second lull with no additional cases in December, the new cases in the Metropolitan Area rose to eleven in January and thirty-one in February, 1950, and there were no signs of diminishment in March.

In the meanwhile the number of dogs being immunized through the usual channels of private veterinary medicine had increased considerably, judging from statistics obtained in a special inquiry by the State Department of Public Health. Nevertheless, by March it was clear that far too small a proportion of the dogs had been vaccinated to prevent further spread of the infection.

*Editor's Note: This article was prepared as of October 1, 1950. In November, 1950, the City Council of Denver unanimously approved abolishing the tax for licensing of dogs. In place of licensing, dog owners are required to have their dogs vaccinated during the months of January and February each year and dogs must wear a vaccination tag on their collars. The new ordinance also authorizes the Manager of Health to give free inoculations if a person cannot afford the rabies shots.

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At this point, the State Department of Public Health asked the United States Public Health Service to provide epidemiological consultation, and two veterinary representatives of the Communicable Disease Center immediately were sent to Denver. On March 8 a planning conference called by the Executive Director of the State Health Department was attended by the two consultants; the directors of the local health services, laboratories, epidemiology, health education, and public health veterinary divisions of the State Health Department; seven representatives of the Denver and Tri-County Health Departments; twenty-two practicing veterinarians of the Metropolitan Area; and also representatives of the regional office of the United States Public Health Service, the United States Bureau of Animal Industry, and the State Department of Agriculture.

The veterinarians readily assured willing participation, and a mass immunization program at temporary clinics, supplemented by intensified licensure and stray dog collection, was agreed upon as follows:

Provision of animal handlers and vaccine by the veterinarians, and performance of the immunizations at the clinics for $1.00 for each vaccination.

Provision of administration, organization, publicity, clerical help, clinic locations, and official certificates through the state and local health departments.

Intensified collection of stray dogs through cooperative measures by the city and county authorities, the Denver City Dog Pound, and the Dumb Friends League.

Overall direction of the campaign by the State Department of Public Health.

Under the chairmanship of the State Director of Local Health Services, all preliminary arrangements were made within a week, with the aid of the radio, press, schools, churches, and many other community agencies. Then, from March 17 through March 22, clinics were held at convenient places throughout the Metropolitan Area, including eleven junior high schools in Denver. By the close of the drive 22,492 animals, including some cats, had been immunized at the emergency clinics. In addition, more than 4,000 animals were vaccinated, between March 8 and 22, by veterinarians in their own establishments. At the same time numerous stray dogs were collected in the pickup campaign.

Using a ratio of one dog for each ten persons in the population, it was estimated that there were 50,000 dogs in the Metropolitan Area, and it was considered essential that more than two-thirds be immunized in order to arrest the epidemic. The veterinarians reported that they performed approximately 13,400 rabies vaccinations between December 1, 1949, and March 22, 1950, in addition to the nearly 22,500 immunizations at the special clinics, a total of about 35,900 vaccinations. This number alone represented 72 per cent of the estimated 50,000 dogs and did not include unreported immunizations, dogs vaccinated in earlier months, and dogs picked up as strays.

The following table gives the number of positive cases reported and verified by laboratory tests, according to month, during the epidemic study-year extending from July, 1949, through June, 1950; and also the number in July, August and September, 1950.

TABLE 1

Reported Animal Rabies Cases, Denver Metropolitan Area, Fifteen Months, July, 1949-September, 1950

Month and year	Total Area	Denver	Adams Co.	Arapahoe Co.	Jefferson Co.
Total	120*	65†	15	9	31
July, 1949	3	0	3	0	0
Aug., 1949	1	0	1	0	0
Sept., 1949	0	0	0	0	0
Oct., 1949	0	0	0	0	0
Nov., 1949	9	8	1	0	0
Dec., 1949	0	0	0	0	0
Jan., 1950	11	1	0	2	8
Feb., 1950	31	18	1	4	8
Mar., 1950	32†	16†	5	2	9
April, 1950	15	10	2	0	3
May, 1950	9	4	2	1	2
June, 1950	1	0	0	0	1
July, 1950	3	3	0	0	0
Aug., 1950	5	5	0	0	0
Sept., 1950	0	0	0	0	0

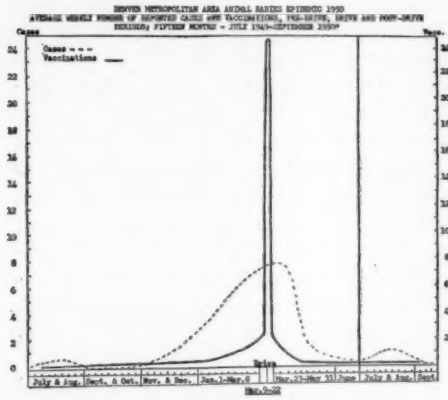
*113 dogs, 6 cats and 1 cow.

†Including one dog from Denver that became rabid in Grand County.

Source: Colorado State Department of Public Health.

It was the soaring upthrust of immunizations at the emergency clinics that turned

the incidence of new cases steeply downward, after an expected lag of about two weeks. The relationship between the volume of immunization and the diminution of the epidemic is made graphic in the chart showing the average weekly number of cases and vaccinations.



*Source: Colorado State Department of Public Health. All cases verified by laboratory tests.

The rabies record for the Metropolitan Area was almost clear in June, 1950, when there was only one case. Nevertheless, the State Department of Public Health continued to watch the incidence of new cases for any upswings that might foreshadow future dangers. As will be noted, three cases occurred in the area in July and five in August.

The State Laboratory and the Denver and Tri-County Health Departments made every effort to see that individuals exposed to infection by rabid animals obtained anti-rabic treatment. The medical profession acted quickly and no human cases developed.

Statewide Progress

Alerted by the emergency in the Denver Metropolitan Area to possible hazards in their own localities, numerous other communities conducted similar immunization programs. The Director of Public Health Veterinary Services of the State Health Department assisted in integrating services and organizing mass clinics in the more distant parts of the Tri-County District; in three other areas served by local health departments, Weld County, El Paso County, and the six-county Northeast Colorado Health District; and in five additional counties without organized local health departments. The official rabies-vaccination certificate forms and information as to procedures were also sent to Pueblo.

Another step toward statewide control was the adoption of the following regulation by the State Board of Health on April 10, 1950:

> All dogs imported into the State of Colorado by any method and for any purpose whatsoever, shall be accompanied by an official health certificate issued by a veterinarian approved by the state of origin. Such certificates shall state that the dog is in good health and free from contagious, infectious or communicable disease, also that such dog has been immunized against rabies not less than thirty days, nor more than twelve months prior to the date of its entry into Colorado, and within the past twelve months the disease has not existed within a fifty-mile radius of the point of origin.

Fundamentals of Future Prevention

Yearly vaccination of all dogs against disease is the basic essential in rabies prevention, because approximately three-fourths of the cases occur among dogs and because the immunity acquired through inoculation endures only about twelve months. Failure to have pets revaccinated within a year's time results in renewed susceptibility and in spread of the disease. In the Denver Metropolitan Area epidemic, practically all of the rabid dogs for which case histories were obtainable from the owners had not been vaccinated within twelve months of the appearance of symptoms. Exceptions were dogs inoculated too recently to have acquired maximum immunity, usually reached in about thirty days.

Immunization as a prerequisite for annual licensure, strict enforcement of licensing requirements, and vigilant collection of strays are potent elements in control of rabies in dogs and in preventing transmission of the disease to man. An ordinance enacted by the Council of the City and County of Denver in April, 1950, provided, among other things, for the vaccination of all dogs not immunized against rabies during 1949 or 1950 and for affixing vaccination tags to the dog collars. In addition,

the ordinance requires that after January 1, 1951, every dog shall have firmly affixed to its collar a rabies vaccination tag bearing the date of the current or the previous year. The Manager of Health is authorized, by ordinance, to impound all dogs which do not bear the proper vaccination tag, and he is charged with providing access to facilities for vaccination of impounded dogs prior to release.

Potential sources of infection may exist at any time, both without and within our borders. Rabies cases were reported to the United States Department of Agriculture by thirty-five states and the District of Columbia in 1949. These cases included 5,237 in dogs, 413 in cats, and ten in man as well as cases among a variety of other animals.

The Department of Agriculture statistics for the years 1940-1949 indicate that rabies was prevalent somewhere in Colorado throughout the period, chiefly among dogs. The total number of reported cases in all types of animals ranged from one to sixty-nine a year. In 1950, the rabies cases in this state had reached 110 by the end of September, all verified by laboratory tests, according to State Department of Public Health records. Of these cases, 106 occurred in the Denver Metropolitan Area; one in a dog taken from Denver in the epidemic period and later becoming rabid in a distant county; and three in animals in other parts of the state. The total 110 cases included 100 dogs, eight cats, one cow, and a skunk.

Bolstering of precautionary programs against rabies is timely in the fall of the year because, contrary to common belief, the statistics indicate that more cases occur in the late winter and early spring than in the summer.

With the lessons of 1950 before us, it is hoped that all areas of the state will develop and persevere in strong preventive programs.*

*Special acknowledgements are due to Dr. George W. Stiles, Director of Laboratories, State Department of Public Health, who made available for this article certain statistics and information from a scientific report in preparation by him.

A NEW APPROACH TO THE TREATMENT OF ATROPHIED MUSCLES RESULTING FROM POLIOMYELITIS

PRELIMINARY REPORT

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In 1947 I started to use 0.25 per cent procaine in physiologic saline with riboflavin, thiamine chloride, and vitamin C for restoration of function in paralyzed muscles resultnig from poliomyelitis. The majority of the patients I saw were chronic cases, ranging from three to nineteen years in duration. The drugs were given intra- and subcutaneously over the muscle areas involved. The results of the treatment have been promising. Atrophied and weakened muscles began to show signs of increased strength and, after varying lengths of time, increase in muscle size was noted. This report covers observations made for fifteen months on ten patients.

The patients who came for this treatment had previously received the best known medical and surgical care in the acute and convalescent stages of the disease and were in an arrested stage of muscle atrophy or contracture. Many cases were receiving physiotherapy at other sources when they first began this treatment.

The method consisted in injecting subcutaneously and intracutaneously from 100 to 200 c.c. of the procaine mixture solution, according to the tolerance of the patient, covering an area of the skin over the involved paralyzed muscle. The injections were given in c.c. doses in one locus, then the needle moved 2 cms. and the dose repeated until the skin over the muscle had received the average dose of 150 c.c.

Prior to injecting any given area, the skin was cleansed with alcohol and painted with

merthiolate. The only side reaction ever encountered were symptoms of dizziness which subsided within ten minutes after completion of the injection. There were no incidences of infection.

Is there any scientific basis for this type of treatment in chronic poliomyelitis? Three years' experience with the procaine solution given in the manner described above, and the results observed therefrom, make one feel that there is a definite scientific basis for this procedure.

1. Procaine has the property of a vasodilator and antispasmodic in addition to its local anesthetic action. As an antispasmodic, it helps to relieve contractures and spastic conditions. Anyone can demonstrate this by injecting 0.25 per cent procaine subcutaneously in a given contracture and the results become evident within a short while. Old contractures may require several treatments. The results obtained are not reversible; once a contracture has been loosened, it will remain so for a long time.

2. The property of vasodilation of procaine has been known for some time. This is evident by the fact that the part treated becomes warm and pink.

The physiologic salt solution used in the injection contains ions of sodium, calcium, and potassium so essential to the life of atrophied muscle fibers. To this I have added ascorbic acid, riboflavin, and thiamine chloride. Metabolism and regeneration of the muscle fibers are assisted by these substances.

The entire procedure is based on the assumption that most paralyzed muscles resulting from polio infection must contain some living muscle fibers even though our present method of muscle testing may not be able to detect it. It is hard to conceive that during the initial stage of polio, the virus will attack consistently every anterior horn cell connected with a particular muscle and render this muscle absolutely zero.

Absolute zero muscles as a result of polio infections are probably present, but they are not as predominant as our present method of muscle testing would seem to indicate. If something could be done to revitalize the remaining dormant fibers of a given muscle an entirely new and different picture would be obtained.

The results obtained so far seem to bear out this supposition. The restoration of a given muscle to function depends then upon the residual number of functioning muscle fibers remaining after the acute stage of the disease has passed. Electromyography could be of help to predetermine the final outcome of a given muscle body when subjected to the injection treatment.

The one objection in the course of these injections is the inconvenience to the patient due to the large number of needle pricks. The pain associated with this procedure is not as great as one would think since the procaine minimizes this feature.

Experiments are carried out at present with iontophoresis as a method of replacing the multiple injections. More will be reported in a subsequent paper.

Conclusions

1. Procaine 0.25 per cent with roboflavin, thiamine chloride, and vitamin C proves to be a valuable form of treatment in the chronic stage of polio, by helping to restore weak and atrophied muscles to a functioning state.

2. Procaine alone helps to overcome contractures where other forms of treatment seem valueless or impossible to apply.

3. The multiple puncture method has proved to be safe and devoid of any serious complications.

4. Iontophoresis may replace the multiple puncture method and widen the application of the treatment to the early and acute stages of poliomyelitis.

The great physicians of all time have understood that medicine is not a study of disease, but a study of man: an individual who is a member of a family and who is part of a community. . . . The purpose of medicine is to make available to all the people, in the greatest possible degree, the achievements of science as they relate to the promotion of health and to the prevention and treatment of disease.— W. G. Smillie, M.D., New England Journal of Medicine, January 12, 1950.

SOME PRACTICAL ASPECTS OF FLUID AND ELECTROLYTE BALANCE IN SURGERY

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A technical discussion of such things as Hasselbalch's equation, millemoles, milleosmoles and millequivalents has driven many a physician away from staff meetings where fluid and electrolyte balance was being discussed or left him thoroughly confused. His confusion lies in the fact that he often fails to see just how such things can be readily utilized in his surgical or medical patients, especially in surgical emergencies or even in chronic surgical malnutrition. It is, therefore, time for many of us to realize that we can meet the problems of fluid balance in our every day practices without keeping a constant eye on the Hasselbalch equation and other such data which many would have us think loom as a dark cloud between us and the successful outcome of our therapy. There is still no substitute for a working knowledge of surgical physiology and, above all, good clinical judgment. Therefore, let us see how this knowledge and judgment can be put to work, for sometimes a clinician may lose his patient by watching his millequivalents rather than the patient.

We have come far in our knowledge of fluid and electrolyte therapy. Seemingly unimportant things such as sodium and potassium ions have now assumed an all-important role in surgical care. We have found that surgical technic alone often does not fulfill the patient's needs. Pre-operative evaluations of his fluid and electrolyte status with proper pre-operative preparation followed by careful electrolyte and nutritional management postoperatively is of paramount importance. Indeed, these things may, in many difficult cases, actually relegate the surgical technic itself to a secondary position in the final analysis of the case.

In order to understand the fluid, electrolyte, and nutritional changes that occur in diseased states it is first desirable to review the fundamental chemical anatomy of the human body and to present the newer concepts of the effect of altering these important constituents. Approximately 70 per cent of the body weight is normally water. This is distributed throughout two compartments, intracellular and extracellular. The latter is divided into interstitial fluid and the plasma or circulating fluid. This relationship in normal and abnormal states is illustrated in Fig. 1 (Abbott) and Fig. 2 (Ellman).

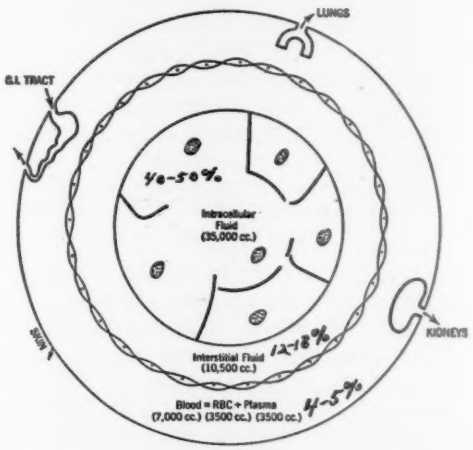

Fig. 1. The Three Compartments of Body Fluids—Schematic diagram illustrating the physical relations and approximate volumes of blood, interstitial fluids, and intracellular fluids, representing the three fluid compartments in the body of a normal 70 Kg. adult. Note also the four agencies through which fluid may be lost or gained, i.e., the gastrointestinal tract, lungs, kidneys, and skin. Not represented in the chart are differences in the protein and electrolyte composition of the various compartments.

The Solutes of the Body Fluids

Those substances contained in the fluid compartments can be divided into three main categories as follows: 1, the organic solutes of small molecular size such as glucose, urea, amino acids, etc.; 2, the inorganic electrolytes; and 3, the organic or colloidal electrolytes which is largely the protein fraction. We shall discuss these separately.

Organic Solutes of Small Molecular Size

The transfer of fluid across a semipermeable membrane is effected mainly by those

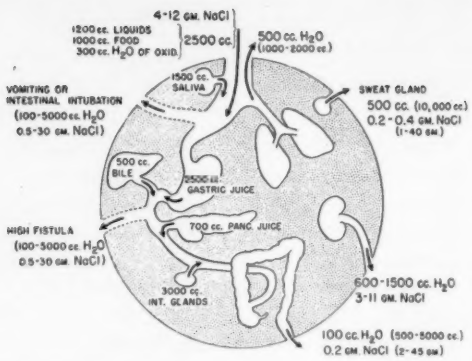

Fig. 2. The normal and abnormal intake and output of fluid and salt. (The possible abnormal loss of fluid and salt is shown in parentheses.)

solutes which are impermeable to that membrane. Since the organic solutes of small molecular size diffuse freely back and forth through the cell membranes they are naturally of little importance in osmotic pressure.

The Organic or Colloidal Electrolytes (Protein Fractions)

Since the proteins do not normally penetrate the cell membranes, they do exert some osmotic effect. This is small in relation to the total pressure, however, because they are not present in great quantity. The plasma albumin fraction is of smaller molecular size than the other proteins and is important since it exerts from 75 per cent to 85 per cent of the total colloid osmotic pressure of the plasma proteins. Thus, changes in the albumin fraction may be important. However, since the proteins are present in relatively low concentration as compared to the inorganic electrolytes, they are of little relative importance and the total quantity of body water is little influenced by them. Perhaps their greatest function lies in the transfer of fluid from one body compartment to another.

We occasionally see a patient with a chronic surgical malnutrition and a consequent reduction in plasma protein concentration. In such a case Abbott points out that we must lay stress also on reduced cardiac output, changes in capillary permeability, filtration or venous pressure and reduced kidney function. One cannot prescribe a rational fluid therapy if these points are not emphasized.

It was once thought by some that increased capillary permeability, increased venous pressure or the protein molecule played the star roles in the production of cardiac edema. More recent work shows us that edema is more likely due to a reduced renal blood flow and hence a reduction in the excretion of sodium. When sodium is retained in the body, fluid is retained also. This is of importance to the surgeon facing a surgical problem in a cardiac patient with edema. Improvement in the cardiac patient is not obtained by a restoration of the plasma albumin concentration to normal but as a rule a normal albumin concentration results when rational therapy is prescribed such as restricted sodium intake, diuretics, proper diet, etc.

This does not mean that blood plasma, albumin or protein preparations are not of benefit in treatment. It is intended to emphasize that failure to appreciate the ramifications of a problem such as edema often accounts for the slow clinical recovery and failures that sometimes occur.

The Inorganic Electrolytes

Some of these substances are present in large quantities and are, therefore, of great importance. The inorganic acid radicals, or anions, such as chlorides and bicarbonates, play a very small role in total osmotic pressure. These radicals move freely back and forth across a membrane and are met with a reciprocal rise and fall of other substances and thus are not so important to changes in total body water.

From the standpoint of osmotic pressure and the quantity of body fluid present the cations sodium and potassium are the most important. Normally sodium is largely confined to the extracellular compartment, while potassium occupies the intracellular compartment. Because of this relationship it is felt that these two ions play the dominant role in determining the quantity of water in each of the two main fluid compartments. The potassium ordinarily does not leave the intracellular space or does so with great reluctance. Sodium may, in

some instances, enter the cell to take the place of potassium in the absence of the latter due to extreme loss. Loss of potassium to the extracellular compartment with a resulting high plasma and urine concentration of potassium usually means that there has been actual destruction of the cell which housed it. This destruction is one way by which fluid and protein may be furnished to an extracellular compartment which is losing ground through dehydration because of diarrhea, vomiting, etc. This, of course, is far from desirable.

Since a large amount of fluid and potassium are lost from the intracellular compartment with dehydration resulting from diarrhea it would, therefore, be desirable to repair that loss with the same substances in the therapeutic regimen. The fluid and sodium are replaced whereas the potassium is not replaced by the usual methods of therapy. It would be important to use a parenteral fluid containing potassium because the patient cannot otherwise replace his loss of that substance by himself for a long time.

Dehydration and Overhydration

If we are to consider dehydrated states we must remember that a loss of water or salt or both may occur. Usually both are lost with a predominance of one or the other substance. Thirst and oliguria are not as pronounced as in salt deficiencies and, as the available water is also reduced, the urine volume falls.

It was previously mentioned that when sodium is retained water is retained also. This rule holds for loss, too. When sodium (or potassium) is lost, water is also lost. Let us go one step further by saying that when nitrogenous products are excreted by the kidney water is also lost in the process. One can readily see then that the dehydrated patient has lost much fluid with his electrolytes and it also follows that if he is unable to eat he must use his own protein stores for energy and will continue to lose even more fluid in eliminating the accumulated nitrogenous end products. This brings us to our next consideration.

Carbohydrates in Preventing Dehydration: Carbohydrates are used by the body for energy in preference to other substances. It can be seen that if a sufficient quantity of carbohydrate is given the dehydrated patient his protein will be "spared" or, more aptly, there is a reduction in protein catabolism in the presence of deficient protein intake and thus his cellular structure is spared. Since carbohydrates are metabolized to CO_2 and water there is no water needed for their elimination by the kidneys and since protein and salt are now spared or replaced, the patient will commence to gain ground and rebuild his damaged fluid compartments. It will also be noted that the water from oxidation of carbohydrates, as indicated above, will help to replace the patient's fluid losses. In states of fluid, food and salt deprivation it has been shown that the taking of as little as 100 gm. of carbohydrates per day decreased the rate with which water was lost. In normal patients, however, dextrose has no apparent effect on the rate at which salt and fluids are lost.

It can be seen by the foregoing that the quantity of water consumed is dependent on the amount of salt and nitrogen taken or the amount of these constituents to be excreted. Thus the quantity of urine is governed to a great extent by the salt and protein intake.

Renal Insufficiency During Water Deprivation: Whipple and others have demonstrated that the rising blood urea during dehydration is primarily due to a reduced urine flow, but is also somewhat dependent on an excessive nitrogen breakdown. It has been pointed out by other workers that the kidneys do not return to normal immediately upon the correction of dehydration and excessive nitrogen catabolism. It is well known that renal insufficiency takes place during periods of water deprivation and it is believed that there are numerous reasons why this occurs. The renal insufficiency is due to renal hypotension, a decrease in the available water and an increase in the osmotic pressure and in the viscosity of the blood. This drop in renal blood pressure may occur before there is a drop in generalized blood pressure. One

can see that a reduction in the rate of glomerular filtration in a shocked or dehydrated patient is a premonitory sign of a generalized peripheral vascular collapse.

We have often heard the remark, "Let's give the patients lots of salt right after surgery." Since there is an inevitable period of renal insufficiency after even a minor surgical procedure it is probable that the patient will be unable to excrete this salt that is thrust upon him for a period ranging from forty-eight to ninety-six hours or longer. This is not too significant in the face of postoperative loss of fluid through vomiting or in the normal patient who will compensate for the retained fluid until he can eliminate it, but in the decompensated patient it may be of grave concern.

Negative Nitrogen Balance Postoperatively: Recently a group of young orthopedic patients having fractures were studied and all were found to be in negative nitrogen balance. Later it was found that patients of any age group who had undergone any type of surgical procedure went into negative nitrogen balance. Still later experiments showed that putting normal individuals to bed threw them into negative nitrogen balance for a period ranging from three to five days or longer and that they gradually adjusted to a positive nitrogen balance after this time. It was further shown that no means of oral or parenteral therapy (plasma, amino acids, etc.) could compensate for this loss of nitrogen balance and that, in most instances, it was either slowed down slightly or not affected at all until the patient corrected his own deficiency by his own means. A woman in pregnancy is the only individual apparently spared this peculiar phenomenon, and that would lead one to believe that perhaps there is a hormonal relationship involved. This led to the use of hormones in postoperative patients and it was found that the use of testosterone had the effect of reducing nitrogen loss in a few of the patients. This work is quite new and perhaps we shall hear more of it in the coming years.

Tests of Certain Blood Constituents as Indices of States of Hydration: It is desirable to emphasize that states of dehydration or overhydration cannot be quantitatively estimated by alterations in the solute concentrations. During the past decade there have been many articles in the literature advocating the use of this test or that for determining certain blood constituents in various stages of dehydration. Some of these tests are the hematocrit, plasma protein concentration, chloride level, specific gravity of whole blood and others. Inasmuch as many clinicians follow these tests rigidly as an index to a patient's state of hydration or in the treatment of shock, certain points should be stressed in regard to them. First of all, we have learned that these various tests aren't of much value. Since it is, after all, the intracellular compartment wherein the most vital changes have occurred, it follows that if a needle is placed into the extracellular compartment (plasma) to withdraw and analyze its contents we are not likely to find out what is going on in the cells themselves at that particular moment, but rather we will arrive at values for the extracellular compartment which we may not want at all. True, the plasma values do, to some extent, reflect the intracellular picture, but the tests we make now will tell us what occurred in the intracellular compartment some eight to twelve hours ago. Many times a physician treating an obviously dehydrated patient will remark that the patient's blood chemistry has remained normal throughout.

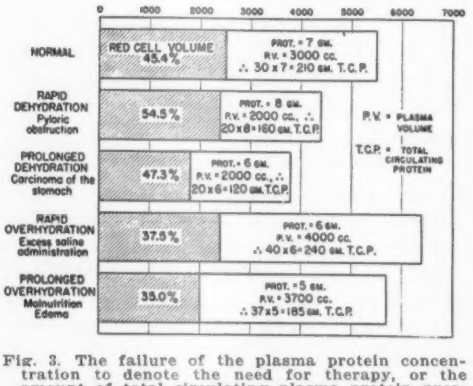

Fig. 3. The failure of the plasma protein concentration to denote the need for therapy, or the amount of total circulating plasma protein present. (The cross-hatched area equals the red cell mass, and the open area of the bar the extent of the plasma volume.)

Let us consider the failure of the plasma protein concentration to denote the need for therapy. This is aptly illustrated in Fig. 3 (Abbott).

Hepatic duct bile and fluid derived from the intestinal mucosa contain approximately the same amount of fixed base and chloride ion as does plasma. Loss of this fluid will cause a reduction of the volume of the blood plasma and of interstitial fluid but often does not alter the plasma chloride or bicarbonate concentrations. Thus, a point of great practical importance to be derived from this is that it is entirely incorrect to regard the plasma chloride concentration as an index of the degree of dehydration and of the extent to which replacement therapy by salt solutions is required. The specific gravity of whole blood and plasma, red cell count and hemoglobin concentration may also be misleading in determining the extent to which dehydrated states have progressed.

The hematocrit is another example of a test of whole blood which lags behind the actual state of hydration in the intracellular compartment by eight hours or more.

Discussion

What is a physician to do to determine the extent of a patient's fluid and electrolyte imbalance? How then can he treat the patient if these laboratory tests are of little or no value? In evaluating a patient's state of hydration, it is essential to obtain first of all a careful, step-by-step history from the patient himself or his relatives. How long has he been ill? Has he been eating? How much water or other fluids has he taken prior to or during his illness? Has he vomited or had diarrhea? How much? If he has had an obvious hemorrhage an attempt should be made to determine how much he has bled. Add about 1,000 to 1,200 c.c. per day for insensible loss of water and determine approximately what the patient's loss of fluid and electrolyte has been. Consider acidosis or alkalosis as possible and remember that if the patient is very dehydrated and has not eaten he is most likely in negative nitrogen balance.

This history should be followed by a careful and complete physical examination, paying particular attention to skin texture and elasticity, sunken eyes, presence of edema, odor of breath and the nature of vomitus, stools and urine. Clinical progress should then be carefully followed with an eye to accurate intake and output and a careful rebuilding of damaged fluid compartments. Allow the patient with a Levine tube in his stomach very little water by mouth. Remember, too, that the kidneys are probably in a state of temporary insufficiency and may not be able to concentrate urine properly. This can be followed by careful checks of the specific gravity.

In advanced dehydration remember that potassium was undoubtedly lost from the intracellular compartment and must, therefore, be one of the building stones in repairing damage to the fluid framework of the body cells. The chemical tests may be of some value at this point in following the patient's progress providing they are carefully done and properly interpreted. Keeping tab on the patient's weight is a good procedure. Good scales are accurate within 0.1 Kg. of body weight and in terms of body fluid this is within 0.1 per cent accurate. The patient who is losing edema or who is rebuilding his fluid compartments will show definite weight changes which may be recorded and plotted to note progress. The kidney insufficiency will not be erased as quickly as expected so fluid and dextrose must be kept up after the patient has improved until the urine is properly concentrated again.

If the patient is in shock it is useful to place a catheter in the bladder, wash it out and then drain it hourly to determine the output. Roughly, if 30 c.c. or more of urine are put out every hour the physician knows that he is probably giving enough fluids. If the value is less than 30 c.c. per hour, he needs to increase the intake.

If adequate facilities are available in a community hospital the determination of blood volume deficits and replacements of those deficits may be carried out without too much difficulty. The use of the Evan's Blue (T-1837) test to determine blood vol-

ume deficits has proved itself useful and accurate in experiment and practice and is far superior to the usual laboratory tests discussed earlier. Belig, Besch, Morton and others have demonstrated that the evaluation of total blood volume deficit, plasma volume deficit, circulating protein deficit, cell volume deficit and hemoglobin deficit will not only reveal quite accurately the specific fluid, protein and cell losses of the patient but may actually be used as a concrete implement for assessing the operative risk if surgery is contemplated.

Conclusion

As pointed out in the beginning of this paper, there is no real substitute for a good basic knowledge of fluid physiology and for good clinical judgment in determining a patient's fluid and electrolyte needs and for carrying out the proper therapy to rebuild his damaged fluid compartments, especially in surgical practice.

AN APPROXIMATION SUTURE

GILBERT B. CHANDLER, M.D.
COLORADO SPRINGS, COLORADO

The following diagrams and description represent a type of suture which has served me well for many years. I believe that the sound principles of tissue apposition which they represent are often ignored or are applied in a manner more complicated and time consuming. Similar descriptions in textbooks appear to omit inclusion of the deep fascia within the sutures.

The incision is made in the usual manner, operation performed, and the posterior muscle sheath and peritoneum sutured. Largs silkworm gut or dermal sutures are inserted in pairs one to two inches from the incision, entering the superficial fascia and fat, piercing the incised muscle sheath on both sides (See Fig. 1).

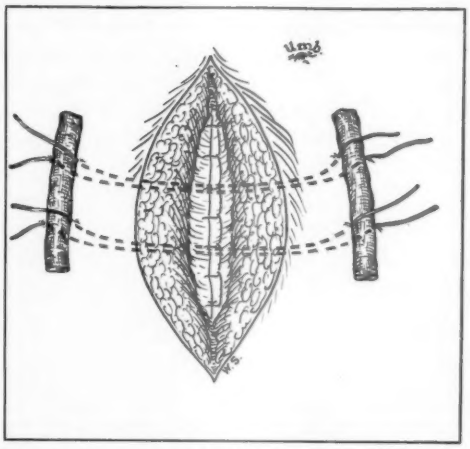

Fig. 2. Deep fascia closed; sutures ready to tie over gauze, glass rod, or plastic tube.

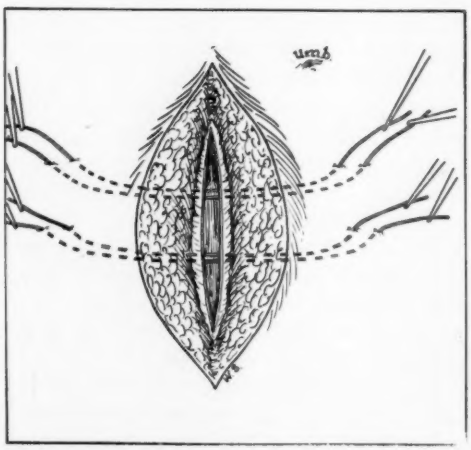

Fig. 1. Silkworm gut or dermal sutures inserted in pairs.

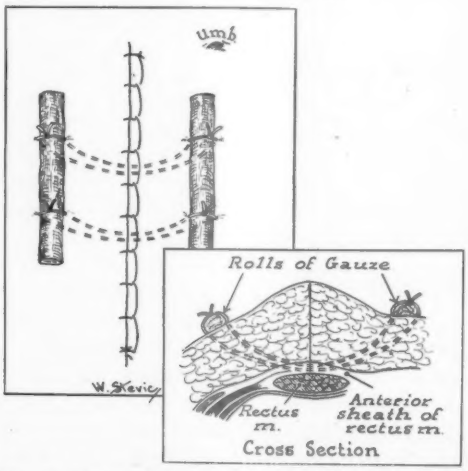

Fig. 3. Suture line everted and tissues accurately opposed by uniform pressure.

Sutures are placed about four or five centimeters apart. The anterior muscle sheath is then sutured with a small caliber continuous locked catgut suture (see Fig. 2).

A roll of gauze the length of the incision is placed on each side of the wound between the ends of each pair of sutures. Some surgeons may prefer a glass rod or plastic tube instead of gauze. This distributes pressure more evenly. The ends of the sutures are tied around the bolsters, just tight enough to cause the suture line to bulge moderately, and the skin is sutured (see Fig. 3).

Summary

The technic represents an approximation, hemostatic, and immobilizing row of stitches. It apposes the deep and superficial surfaces uniformly regardless of depth. It is my opinion that the patient is more comfortable incidental to the early mobilization which we have come to institute. He is often permitted to return home earlier and hospitalization may thereby be shortened. The scar is usually minimum.

Case Report

CHOLEDOCHODUODENAL FISTULA FOLLOWING PERFORATION OF DUODENAL ULCER

TREATMENT BY SUBTOTAL GASTRECTOMY

G. F. WOLLGAST, M.D., and
W. P. STAMPFLI, M.D.
DENVER

Internal biliary fistulae usually follow perforation of the biliary tract by calculi. They may also result from a perforating duodenal ulcer, from surgical injuries, and from rupture of a liver or gallbladder abscess. Such fistulae may connect the biliary tree with any other abdominal organ, and may at times involve organs in the chest.

Hunt and Herbst[1], in 1915, reported the first biliary fistula to be diagnosed by x-ray. Until 1942, only ninety cases with preoperative diagnosis had reached the literature.

The diagnosis should be suspected when a patient with peptic ulcer develops symptoms of cholangitis, biliary colic, fever and dull pain. Internal biliary fistulae also may produce nausea, weight loss, and diarrhea. The diagnosis is often confirmed by roentgen methods. The presence of air or barium in the biliary tract is almost diagnostic, but the examiner must be careful to rule out a dilated sphincter of Oddi which may also allow duodenal contents to flow into the biliary system. When a fistula is present, its opening must be demonstrated proximal to the sphincter. Gas produced by bacterial action is "bubble-like" and easily differentiated[2].

Dean[7] reported twenty-five surgically treated cases, many of which were technically difficult. Thirteen died following operation. The surgical risk seems to increase with delay. Treatment of fistulae between the gallbladder and other organs may be by cholecystectomy and closure of the tract, T-tube drainage in certain cholodochal fistulae or as in the case reported here, by gastric resection. Treatment by gastric resection has probably been used before, but as far as we know, results have not been published. After resection of the stomach, regurgitation of duodenal content into the biliary system may still occur, but this material should be less irritating than the normal duodenal content[6]. When the fistula is the result of chronic duodenal ulcer, gastric resection diverts the food stream, thus decreasing the inflammatory process at the fistulous site and allows the ulcer to heal.

CASE REPORT

Our patient was a 32-year-old male truck driver. An abstract of his case record follows:

Present Complaint: Intermittent epigastric pain for the past fourteen years.

Course: At the age of 18 years, typical symptoms of duodenal ulcer developed. Periods of distress lasting for three to four months alternated with periods of relief. In 1938, x-ray examination revealed an ulcer in the first portion of the duodenum. In 1945, he was discharged from the Army because of duodenal ulcer. His weight dropped steadily during the next two years from 186 to 145 pounds. In January, 1947, symptoms changed; the epigastric pain became more constant, and it was not relieved by alkalis. Food increased the pain, and there was a sensation of fullness and nausea. He frequently vomited bright red blood.

Physical Examination: The patient was a pale, weak, distressed white man. He was tender beneath the right costal margin near the midline. Fullness and dullness were noted over the stomach area.

A gastric analysis produced 125 c.c. of foul undigested material, although there was a large emesis during the previous night. Fractional tests were normal. Blood chlorides, serum proteins and albumen-globulin ratio were also normal. We did not expect the blood chemistry to be normal however, since the food intake had been inadequate for many weeks. Gastric lavage and antispasmodics afforded relief.

The patient was brought into the hospital where x-ray studies (Fig. 1) revealed the following: There was retained secretions in the stomach, and the stomach was dilated. An obstructive process was found in the first portion of the duodenum and barium was discovered in the common bile duct, the cystic duct, the bile duct and the lower hepatic ducts. There was a communication between the first portion of duodenum and the common bile duct.

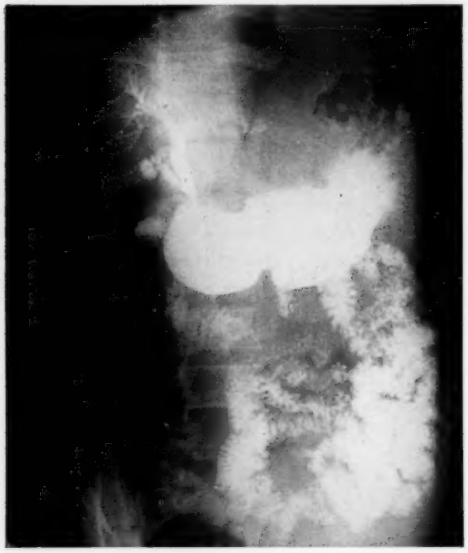

Figure 1

An operation was performed on June 14, 1947. The report follows:

Operation: Subtotal gastric resection. Hoffmeister modification of posterior Polya. The common duct was isolated, it was firmly attached to an indurated area on the posterior surface of the duodenum. This was the site of an active ulcer which had perforated into the common duct, creating an internal biliary fistula. Repair of this fistula might have endangered the lumen of the common duct. Also the indurated condition of the duodenum would predispose toward a duodenal fistula. Therefore, it was decided to do a subtotal gastrectomy to divert the intestinal stream away from the fistulous tract and also to attempt cure of the ulcer. The duodenum was isolated as well as possible considering the inflammatory reaction about it. The entire pylorus was included in the resected specimen. The duodenal stump was closed, care being taken not to constrict the site of the fistula. Three-fourths of the stomach was resected. A gastro-jejunostomy was done.

Pathological Report: Hypertrophy of stomach wall with subacute and chronic gastritis.

There was nothing unusual in the postoperative course. Postoperative x-ray studies (Fig. 2) showed the enterostomy to be at the most dependent portion of the remaining stomach. Barium ran without difficulty into the jejunum. There was no "dumping." A film of the abdomen made three hours after the ingestion of barium showed no retention in the stomach. All the barium lay in the terminal ileum and cecum.

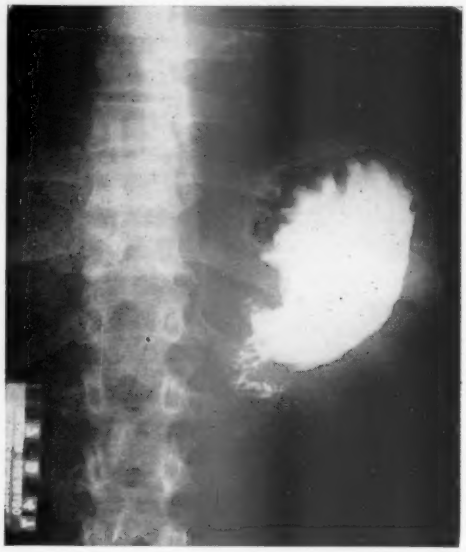

Figure 2

Clinically, the patient has remained entirely well for the past three years. Contrary to our advice, he does not restrict his diet in any way. His weight is 208 pounds. He pursues his occupation as a truck driver with no difficulty.

Conclusion

Choledochoduodenal fistulas caused by perforation of a duodenal ulcer into the common bile duct can be diagnosed by x-ray. Treatment by gastric resection, although not previously mentioned in the literature, was successful in this case.

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Organization

NEW MEXICO
Medical Society

C. B. Elliott Named G.P. of the Year

The House of Delegates of the New Mexico Medical Society named Dr. Carey B. Elliott of Raton to receive the Society's annual award as "General Practitioner of the Year," at the Annual Session May 3, in Santa Fe. Dr. Elliott had been the nominee of the Colfax County Medical Society for this award.

Dr. Elliott was born in Holden, Missouri, May 16, 1886, and received his medical degree in 1909 from Washington University, St. Louis. He interned in St. Luke's Hospital, Denver, and then began practice in New Mexico, first at Cimarron, later at Dawson, where he remained until 1919. He moved to Raton in 1919, and has practiced there ever since. He was President of the New Mexico Medical Society in 1927, and has held every office in his county society at one time or another. He is a Fellow of the American College of Surgeons, a Past President of the local Rotary Club, and has been active in many civic and fraternal organizations in Raton. In spite of a busy practice, he manages to "ride" several hobbies, including extensive travel, study of the old New Mexico missions and other early Southwest history, and amateur photography.

News Notes

NEW MEXICO CLINICAL SOCIETY

Dr. Warren R. Sisson, Professor Emeritus of Pediatrics at Harvard Medical School, Boston, Massachusetts, presented a lecture Tuesday, June 12, at 8:00 p.m., at the Veterans Hospital Recreation Hall, Albuquerque, New Mexico. Dr. Sisson spoke on "The Problem of Obesity." This lecture was presented through the courtesy of the Maternal and Child Health Division of the State Department of Health and the New Mexico Pediatric Society.

A.M.A. ANNUAL SESSION

The New Mexico Medical Society was represented by the following physicians at the American Medical Association's Annual Session in Atlantic City: Carl H. Gellenthien, Valmora; Clarence M. Kemper, Albuquerque; Herman A. Kling, Albuquerque; A. D. Maddox, Las Cruces; Joseph E. Merritt, Jr., Las Cruces; Louis M. Pavletich, Raton; Thomas K. Preston, Anthony; Carol K. Smith, Santa Fe; Marcus J. Smith, Santa Fe, and Raymond L. Young, Santa Fe.

Dr. W. R. Lovelace, II, of Albuquerque, has been appointed Chairman of the Armed Forces Medical Policy Council. As chairman, he is also principal advisor to the Secretary of Defense on matters of health and medicine, and represents the Department of Defense in dealings with other agencies on health matters. Dr. Lovelace was appointed to this position by the Secretary of Defense, the Surgeon-General of the Army, Navy and Air Force.

Dr. Lovelace is recognized as one of the nation's top experts on aviation medicine, and received several awards for his research in that branch of medicine during the war. Upon completion of his internship at Bellevue Hospital, New York, the physician joined the Mayo Clinic at Rochester, Minnesota, and was for four years a fellowship student in surgery there. He then studied surgery in Europe before returning to the Mayo Clinic. He started his research in aviation medicine while with that clinic. With Dr. Walter M. Boothy, he developed an oxygen mask for high altitude flying which won them the Collier Trophy in 1939.

In 1942 Dr. Lovelace was appointed director of research and consultant in surgery for the United States Army Air Forces. He held the rank of Colonel and directed the Air Force's research laboratory at Dayton, Ohio. He holds the Distinguished Flying Cross, Southwest Pacific Theater ribbon, the European Theater ribbon with three bronze stars, and the American Theater ribbon.

Los Alamos County Medical Society has embarked upon a campaign to have a city ordinance passed requiring licensure and vaccination for rabies of the some 4,000 dogs inhabiting the "hill" of Los Alamos. Over 600 people have been bitten by dogs in Los Alamos this past year.

The County Medical Society has shown films on rabies to various lay and civic organizations in an attempt to educate the public as to the dangers of rabies and what preventive measures should be taken.

MORE HOURS *of Allergy Relief...*

8 to 24 from a single dose

LOOK in the file of clinical reports on antihistaminics and it will be apparent that one is outstanding for prolonged action. It is DI-PARALENE Hydrochloride (Chlorcyclizine Hydrochloride, Abbott), a "different" antihistaminic with a piperazine side chain rather than one of the conventional types.

Numerous clinical reports attest to the longer lasting allergy relief with DI-PARALENE. In many cases relief up to 24 hours can be obtained from a single dose. Initially, DI-PARALENE should be administered in 50-mg. doses three times a day for the average adult, but in the majority of cases this dosage can later be reduced to one or two doses a day. One 50-mg. tablet at bedtime often provides symptomatic relief through the night. Frequently, no additional dosage is required until the next bedtime. Undesirable side-effects are comparatively few and mild.

This season try longer-acting DI-PARALENE in your allergy cases. Available at prescription pharmacies in 50-mg. and 25-mg. tablets in bottles of 100 and 500. Abbott

Specify Abbott's new long-acting antihistaminic

DI-PARALENE *Hydrochloride*

(CHLORCYCLIZINE HYDROCHLORIDE, ABBOTT)

REFERENCES: Spielman, A. D. (1950), N. Y. St. J. Med., 50:2297, Oct. 1. Brown, E. A., et al. (1950), Ann. Allergy, 8:32, Jan.-Feb. Jenkins, C. M. (1950), J. Nat. Med. Assn., 42:293, Sept. Cullick, Louise, and Ogden, H. D. (1950), South. Med. J., 43:632, July. Ehrlich, N. J., and Kaplan, M. A. (1950), Ann. Allergy, 8:682, Sept.-Oct.

OFFICIAL PROCEEDINGS HOUSE OF DELEGATES OF THE NEW MEXICO MEDICAL SOCIETY

May 3, 1951—Santa Fe, New Mexico

The Sixty-Ninth Annual Session of the House of Delegates of the New Mexico Medical Society was called to order by the President, Dr. I. J. Marshall, on Thursday morning, May 3, 1951, at 9 o'clock, in St. Francis Auditorium, Art Gallery Museum of New Mexico, Santa Fe.

Delegates present were:

Bernalillo County—Dr. Stuart W. Adler, Dr. W. O. Connor, Jr., Dr. A. H. Follingstad, Dr. Robert Friedenberg, Dr. H. L. January, Dr. Bert Kempers, Dr. A. L. Maisel, Dr. Brodie C. Nalle, Dr. W. E. Nissen, Dr. Edward Parnall, Dr. M. G. Rosenbaum, Dr. R. A. Trombley, Dr. W. I. Werner, Dr. Guy H. Williams.

Chaves County—Dr. E. J. Hubbard, Dr. Earl L. Malone.

Colfax County—Dr. J. H. Burress.

Curry-Roosevelt County—Dr. John F. Conway, Dr. George F. Prothro, Alternate-Delegate.

Dona Ana County—Dr. J. G. Sedgwick.

Eddy County—Dr. C. Pardue Bunch, Dr. Pete J. Starr, Dr. C. E. Galt, Alternate-Delegate.

Grant County—Dr. Sidney F. Baker.

Lea County—Dr. Coy E. Stone.

Los Alamos County—Dr. Martin S. Withers.

Luna County—Dr. L. J. Whitaker.

McKinley County—Dr. Frank W. Parker.

Quay County—No delegate present.

San Miguel County—Dr. Wallace C. Beil.

Santa Fe County—Dr. H. S. A. Alexander, Dr. Charles J. McGoey, Dr. Eric P. Hausner. Dr. Aaron E. Margulis, Dr. Philip L. Travers.

Sierra County—Dr. W. B. Cantrell, Alternate-Delegate.

Taos County—Dr. A. M. Rosen.

The President called upon the Secretary for the reading of the minutes of the last meeting. Dr. Carl H. Gellenthien made a motion that the House of Delegates dispense with the reading of the minutes of the last meeting, inasmuch as the minutes had previously been published in the Rocky Mountain Medical Journal. The motion was seconded by Dr. W. E. Nissen and carried.

The President introduced Mr. Harry Luttbeg, Manager, Better Business Bureau of New Mexico. Mr. Luttbeg stated that prior to the meeting a booklet, "Facts You Should Know About Health Cures," had been sent to each member for his perusal. Mr. Luttbeg stated that each year the public is milked of many thousands of dollars on "gadgets" or machine-type promotions introduced by "quacks." His Bureau is of the opinion that through the cooperative efforts of the Bureau and of the State Medical Society, that the public can be warned and educated as to these "quack" cures, and thus great strides can be made in the constant fight to protect the public. He requested the State Society to appoint a committee to work with his Bureau in studying the problem and issuing public warnings and advice.

Dr. J. C. Sedgwick made a motion that a committee be appointed by the incoming President to cooperate with the Better Business Bureau, and that the committee should make a report to the Council before any specific action is taken. The motion was seconded by Dr. C. Pardue Bunch and carried.

Mr. Harvey T. Sethman, Business Manager of the Rocky Mountain Medical Journal, was called upon to give his annual report of the Journal. Mr. Sethman brought greetings from the Colorado State Medical Society and extended a cordial invitation to the members of the New Mexico Medical Society to attend the Rocky Mountain Medical Conference in Denver next week.

Mr. Sethman reported that the Journal has published everything that has been submitted to it from the New Mexico Medical Society, up to the material presented during the past month, which will appear in the May issue. He stated that the membership of the five Rocky Mountain States is gradually increasing, and that the 3,000 mark has been passed in subscriptions to the Journal. Mr. Sethman pointed out that the Rocky Mountain Medical Journal is considered one of the leading medical journals nationally. The magazine is operated on a non-profit basis; as the income increases, more material is published; but as the income decreases, the material is decreased, as of necessity. The Journal tries to keep within a plus or minus of $1,000 any one year, so that if by chance the Journal makes a little profit one year, the following year it can be cut.

The Journal made a profit during the war years, due to long-time advertising contracts, which could not be broken, and the shortage of paper. As a result, the magazine carried more advertising than was necessary, and a profit of $8-$9,000 was made. The fiscal year ends on September 1, and a loss of $1,210 will be sustained—which is puting back into the Journal some of the profit made during the war.

Mr. Sethman suggested that members give Dr. Gellenthien, the Scientific Editor, and Mr. Marshall more material which is suitable for publication. He particularly suggested that County Medical Societies give Mr. Marshall more news concerning their activities for publication in the Journal.

The President then called upon the Secretary-Treasurer, Dr. L. G. Rice, Jr., for the annual financial report. Dr. Rice reported that the books had been audited by Linder, Burk and Stephenson of Albuquerque, and then read the following report:

Financial Report

April 26, 1950, to April 25, 1951

RECEIPTS:		
1950 membership fees		$ 1,395.00
1951 membership fees		10,650.00
American Medical Assn. receipts in trust		8,437.50
American Medical Assn. Educational Foundation (Contra)		540.00
Interest on U. S. Treasury Bond		12.50
Interest on savings account		41.04
Total receipts		$21,076.04
DISBURSEMENTS:		
American Medical Assn. receipts in trust paid		$ 8,612.50
American Medical Assn. Educational Foundation (Contra)		540.00
Rocky Mountain Medical Journal		920.00
Dona Ana County Medical Society Annual Meeting		500.00
Salary—Executive Secretary		4,421.23
Salary—Stenographer		1,395.61
Legislative expense		350.00
Legal and audit		757.82
County Medical Society Conf.	$413.80	
Less—Member contributions	267.00	
		146.80
Travel		2,061.04
Rent		469.20
Purchase of office furniture and equipment		405.48
Office expense		333.28
Telephone and telegraph		351.27
Petty cash		25.00
Dues and subscriptions		77.00
Miscellaneous		136.80
Withholding and social security taxes		987.35
Less—Withholding and social security taxes included in salaries but not actually a cash disbursement		837.74
Total disbursements		$21,652.64

EXCESS OF DISBURSEMENTS OVER RECEIPTS		$ 576.60
CASH BALANCE, APRIL 26, 1950		$12,954.79
CASH BALANCE, APRIL 25, 1951		$12,378.19
REPRESENTED BY:		
Checking account—Albuquerque National Bank		$ 8,242.98
Savings Account—Albuquerque National Bank		4,135.21
Total		$12,378.19

Dr. W. E. Nissen made a motion that the financial report be accepted. The motion was seconded by Dr. Peter J. Starr and carried.

The Treasurer reported that at the last annual meeting the Executive Secretary was instructed to prepare a proposed budget of expenditures for the new year. The budget, as proposed, is herewith submitted:

Proposed Budget

REVENUES:		
Dues, 375 members @ $27.50*		$10,312.50
Dividend: U. S. Treasury Bond		12.50
Interest: Savings Account		41.04
1% for collecting A.M.A. dues		93.75
Reimbursement of rent from N. M. Heart Assn.		120.00
Joint user telephone, N. M. Heart Assn.		24.00
Total revenues		$10,603.79
DISBURSEMENTS:		
Salaries:		
Executve Secretary	$4,500.00	
Stenographic services	2,160.00	
		$ 6,660.00
Travel Expenses		2,000.00
Audit		80.00
Rent (12 months @ $45.84)		550.08
Telephone and telegraph		300.00
Office expense		350.00
Taxes:		
Social Security	$ 99.90	
Employment Security Com.	179.82	
		279.72
Meetings:		
Annual Meeting, Santa Fe	$500.00	
Conf. of Co. Soc. Officers	150.00	
		650.00
Miscellaneous		200.00
Total disbursements		$11,069.80
DEFICIT		$ 757.30

*$2.50 of annual dues of $30.00 goes to the Rocky Mountain Medical Journal for subscriptions.

After the reading of the budget, the Treasurer reported that the Council had recommended a $5 increase in dues, to offset the deficit in the budget.

Dr. W. O. Connor made a motion that the House of Delegates raise the dues of the members $5, and that the Council be authorized to increase the salary of the Executive Secretary commensurate with the raise in dues, as it sees fit. Motion was seconded by Dr. W. I. Werner.

Dr. John F. Conway dissented the motion, and qualified it by saying that he felt an increase of $5 was inadequate, and suggested that a sufficient amount be approved to increase the budget to an amount that it will not be necessary to raise the dues again next year.

The President asked Mr. Harvey Sethman of the Colorado State Medical Society for an expression of experience from his Society. Mr. Sethman stated that the dues to the Colorado State Medical Society are $50, and that the dues for most of the State Societies are that much, except for those Societies who have a very large membership or who do not operate a full-time office.

After discussion, Dr. W. O. Connor withdrew his previous motion and moved that the dues be raised to $10, and that the Council be authorized to increase the salary of the Executive Secretary commensurate with the raise in dues, as it sees fit. The motion was duly seconded and carried.

The President called upon the Executive Secretary, Mr. Ralph Marshall, for a reading of the Council report. The Executive Secretary first expressed his appreciation to the members of the Medical Society for the confidence they had bestowed in him, and expressed hope that with the increase in dues, that many more constructive activities can be accomplished by the Society which, heretofore, were impossible, due to insufficient funds.

The Executive Secretary then read the following report of the Council:

Council Report

Your Council reports memberships by counties as follows:

	1951	1950		1951
	Jan. 1-Apr. 25	Total	Apr. 25-Dec. 31	Jan. 1-Apr. 25	A.M.A. members
PAID MEMBERSHIP					
Bernalillo	133	126	20	106	132
Chaves	21	23	1	22	21
Colfax	8	14	3	11	8
Curry-Roosevelt	17	20	2	18	17
Dona Ana	11	13	3	10	11
Eddy	20	24	3	21	19
Grant	15	15	1	14	14
Lea	13	14	3	11	13
Los Alamos	8	10	4	6	7
Luna	5	4	—	4	5
McKinley	9	9	1	8	9
Quay	6	5	1	4	3
San Miguel	11	10	1	9	11
Santa Fe	41	49	9	40	41
Sierra	6	9	—	9	6
Taos	5	5	—	5	5
Members-at-large	27	24	4	20	23
Total paid members	356	374	56	318	345
NON-PAYING MEMBERS	13	14	8	6	—
Total membership	369	388	64	324	345

Since the books were audited, dues for four members of Santa Fe County Medical Society have been received, making a total of 373 members for 1951. At the end of 1950 the Society had the largest number of members in its history, 388. Nevertheless, your Council reports that there are still some 100 doctors in the State who are eligible for membership in the State Medical Society. Each County Medical Society is respectfully requested to contact the non-members in its area and invite them to become members of the County and State Medical Societies and to participate in the activities thereof.

Necrology Report

Your Council reports with sorrow and regret the passing of the following eight fellow members of the Medical Society during the past year:

Leo B. Cohenour, M.D., Albuquerque, April 25, 1951.
H. D. Corbusier, M.D., Santa Fe, August 31, 1950.
Cranford H. Douthirt, M.D., Santa Fe, December 1, 1950.
Robert Miller Fulwider, M.D., Truth or Consequences, May 5, 1950.
Zalmon E. Funk, M.D., Santa Rosa, December, 1950.
Lincoln S. Hemmings, M.D., Bernalillo, September 30, 1950.

Milton S. Pollard, M.D., Albuquerque, January 2, 1951.

Sidney E. Seid, M.D., Mountainair, November, 1950.

Your Council requests the House of Delegates to recognize the demise of these former fellow members and instructs the Secretary to inscribe with honor and regret their names on the records of the Society.

In addition, your Council reports that the following doctors in the State have died during the past year:

Linda H. Barry, M.D., Corona, September, 1950.

Bryant S. Christensen, M.D., Ft. Bayard, October 18, 1950.

Harry P. Mera, Jr., M.D., Santa Fe, April 16, 1951.

Parker C. Kalloch, M.D., Tularosa, February 28, 1951.

Woman's Auxiliary

On May 5, 1950, in Las Cruces, the Woman's Auxiliary to the New Mexico Medical Society was reorganized. The following officers were elected: Mrs. Carl Mulky, President; Mrs. Philip L. Travers, Vice President; Mrs. I. J. Marshall, Recording Secretary; Mrs. Charles M. Thompson, Corresponding Secretary; and Mrs. Benjamin Barzune, Treasurer.

During the past year new County Auxiliaries have been organized in Chaves, Colfax, Curry-Roosevelt and Southwest Medical District, comprising Luna, Sierra, Dona Ana and Grant Counties. There are now seven organized medical Auxiliaries, the other Auxiliaries being Bernalillo, Santa Fe, and Lea Counties.

Your Council commends the tremendous progress the Auxiliary was made during the past year, and especially commends Mrs. Carl Mulky, President, who has been largely responsible for the organization of these new Auxiliaries. Mrs. Mulky has personally visited each of the seven Auxiliaries during the past year, and has assisted each of the new Auxiliaries in getting organized.

Your Council recommends that each County Society further encourage and promote the activities of these Auxiliaries and urge the establishment of an Auxiliary in the remaining six County Societies.

Field Work

Your President or Secretary-Treasurer and Executive Secretary have personally visited fourteen of the sixteen County Medical Societies during the past year. Your Council recognizes the tremendous loss of time from practice and the vast amount of mileage traveled by your President and Secretary-Treasurer, and commends them for their time and effort expended in making these personal contacts.

Malpractice Insurance

During the year 1950 the United States Fidelity and Guaranty Insurance Company, which writes malpractice insurance for the New Mexico Medical Society, reports that there have been seven cases settled and four pending, making a total of eleven malpractice cases filed against members of the Society.

Of the seven cases settled, $12,951.85 was paid by the company in judgments. The company reports that premiums collected from Society members totaled approximately $20,000. The company believes that, when the remaining four pending cases are settled, it will be well off if it breaks even. The company further reports that two cases against members have already been filed this year.

The Insurance Company and your Council request members to take cognizance of this number of malpractice cases, and urges that steps be taken personally by members to decrease the number of cases which are filed each year.

Supplemental Report

Your Council met Wednesday night, May 2, 1951, and hereby respectfully submits the following report of actions and recommendations for consideration and approval by the House of Delegates:

1. In February of this year the President asked the Advisory Committee on Insurance Compensation, whose chairman is Dr. Lewis M. Overton, to investigate the various insurance companies who would be willing to submit a bid on a group health and accident insurance policy for the State Society. Dr. Overton reported to the Council that he had discussed the matter with several insurance companies, and up to the present time only two were able to provide such a group policy—the Washington National Insurance Company and the Commercial Casualty Company.

Dr. Overton called to the attention of the Council that in 1945 the State Society endorsed the Commercial Casualty Company to sell health and accident insurance to the members of the State Society, but that there had been very poor coverage of the members. He pointed up that there are several doctors in the State who are not able to buy health and accident policies, due to physical disabilities, but that these doctors would be covered under a group policy.

The following recommendation is submitted: That the State Society disregard the possibility of a true group plan, inasmuch as it would take too high a percentage requirement of members; and that the House of Delegates re-endorse and permit a general resolicitation of members of the New Mexico Medical Society by the Commercial Casualty Insurance Company and endorse the additional plan of Washington National Insurance Company to make possible a $500 monthly indemnity to those members of the Society who might desire it. It is further recommended that Dr. Overton's committee continue its work with these insurance companies to work out the benefits of the plans, and that as soon as the committee approves the plans, the insurance companies may begin soliciting.

2. The Council recommends that the dues for the following members be rescinded, upon recommendation by their component medical societies: O. J. Whitcomb, M.D., Raton; W. M. Lancaster, M.D., Clovis; O. I. Nesbit, M.D., Espanola; L. A. Hubbard, M.D., Raton; John F. Cotnam, M.D., Armed Forces (formerly of Clovis).

3. The following doctors were approved for membership-at-large, after letters of recommendation to references and confirmation from the A.M.A. Biographical Department had been received: George K. Arnold, M.D., Socorro; E. A. Deans-Barrett, M.D., Belen (now a resident at Tulane University); John R. Hanford, M.D., Corona; Charles E. Long, M.D., Socorro; John M. Parato, M.D., Bernalillo.

4. The Council recommends that the report of Dr. J. C. Sedgwick's committee on revision of the By-Laws be submitted to the House of Delegates for consideration. At the same time the Council requests the House of Delegates to select a General Practitioner of the Year from the nominees submitted by the County Societies and that the title of honorary membership also be conferred upon the candidate chosen.

5. The Council recommends that a Committee on Industrial Health be established, to be appointed by the President.

Following the reading of the Council report, the President announced that there were several actions recommended by the Council which must have the approval of the House of Delegates. The first recommendation concerned the adoption of a group insurance policy. The President asked for discussion.

Dr. Carl H. Gellenthien stated that after the Council meeting the question had come up as to Business Men's Assurance writing such a policy for the Society, and it has developed that this insurance company would also like to be endorsed, and that it was his understanding that the Council had endorsed any company properly certified, and if so, then Business Men's Assurance Company should be included in the endorsement.

Dr. John Conway stated that Business Men's Assurance Company had come to the Society's rescue when help was most needed. The company has lost money on the plan, but it is still going along. Dr. Conway stated that he felt it would show ingratitude on the part of the Society to adopt any kind of group policy without first consulting B.M.A.

Dr. Conway made the following motion: "I move that the House of Delegates go on record as being in favor of some sort of group policy for its members; that previous endorsements be withdrawn; that the insurance committee draw up an accurate program which states its wants; that the program be submitted for bids to recognized insurance companies doing business in the

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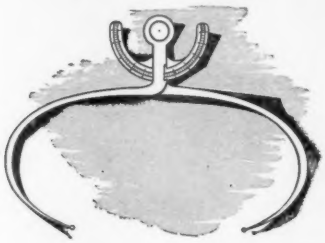

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State of New Mexico under the supervision of the Department of Insurance." Motion was seconded by Dr. J. C. Sedgwick.

Dr. W. E. Nissen objected to the word "withdrawn" in the motion, because there are some doctors in Albuquerque who are covered under previous policies which have been endorsed who are disabled. It was his opinion that the matter should be tabled until next year.

Considerable discussion then ensued as to whether the previous endorsement of the Commercial Casualty Company should be withdrawn, inasmuch as the company had apparently made very little effort in contacting the membership for inclusion in the policy. It was further pointed up that this company has lost 27 per cent of the members covered since its endorsement.

Mr. Lou LaGrave, Executive Director of the New Mexico Physicians' Service, was called upon for comments. Mr. LaGrave stated that about a year ago the Business Men's Assurance Company had suggested a group life insurance policy to the membership, and that at that time it was the consensus that there would not be enough interest to press the matter further.

Mr. LaGrave stated that it will be necessary for whatever company writes the policy to have a certain percentage of the members, for the policy to provide true group insurance. It was his opinion that the only thing that would be of interest to the New Mexico Medical Society would be true group insurance, which usually requires about 50 per cent of the membership for health and accident coverage, and about 75 per cent of the membership for life insurance coverage.

Mr. LaGrave further observed that the present policy with Commercial Casualty Company very definitely states that if the group drops below a certain percentage, the entire policy can be cancelled. The policy is not cancellable during the time that the premiums have been paid, but the policy is not guaranteed renewable. There is danger that if the Medical Society withdraws its endorsement of the Commercial Casualty Company, that the company may cancel out all the policies it now holds. Mr. LaGrave stated that there are several members who are in dire need of protection, who could get it only through a group policy, and that it seemed to him that a majority of doctors in the State have no protection at all now and that they would be better off if they would endorse one company and draw up the requirements expected, and have true group insurance. The rates and the type of policy offered will depend on certain conditions, such as the average age of the members, physical handicaps, etc. Mr. LaGrave warned that there is a possibility that no insurance company will bid on the policy.

Dr. John Conway then asked that his previous motion be withdrawn and made the following motion: "I move that the House of Delegates go on record as favoring some form of group insurance for its members; that the insurance committee be requested to draw up a plan which meets the Society's needs and that that plan be submitted to reputable, reliable insurance companies doing business in the State of New Mexico for bids; and that until such time as that has been done that no further action be taken with regard to extending our present program." The motion was seconded by Dr. H. L. January and carried.

The President stated that the second item in the recommendations of the Council which required action by the House of Delegates was the approval of the doctors whose names had been submitted for membership without dues, namely: Doctors O. J. Whitcomb, W. M. Lancaster, O. I. Nesbit, L. A. Hubbard, and John F. Cotnam. It was pointed out that membership without dues is conferred only on those members who because of illness, financial hardship, or retirement from active practice, are unable to pay the regular dues, and since Dr. John F. Cotnam is in the Armed Forces, he would not come under that category. Dr. W. E. Nissen made a motion that dues be rescinded for Doctors O. J. Whitcomb, W. M. Lancaster, O. I. Nesbit, and L. A. Hubbard. The motion was seconded by Dr. John F. Conway and carried.

The President stated that the applications for membership-at-large, which had been read by the Executive Secretary, required approval by the House of Delegates. Dr. W. E. Nissen moved that the name of the gentleman from Belen be tabled until the next meeting of the House of Delegates. The motion was seconded by Dr. W. O. Connor and carried.

Dr. W. O. Connor moved that the applications for membership-at-large of Doctors George K. Arnold, John R. Hanford, Charles E. Long, and John M. Parato be accepted. The motion was seconded by Dr. Brodie C. Nalle and carried.

The President stated that at the meeting of the 1950 House of Delegates he was instructed to appoint a committee to recommend a revision of Chapter I of the By-Laws on Membership. A committee composed of Dr. J. C. Sedgwick, Chairman, Las Cruces; Dr. G. A. Slusser, Silver City; Dr. W. J. Hossley, Deming; and Dr. W. B. Cantrell, Truth or Consequences, was appointed. (The report of the committee was published in the June, 1951, issue.)

Dr. Stuart W. Adler suggested that the phrase, "a graduate of a medical school in 'good repute,'" be changed to read, "a graduate of a medical school approved by the American Medical Association," to clarify the meaning of "good repute."

Dr. Charles J. McGoey, Secretary, State Board of Medical Examiners, called to the attention of the House of Delegates that the Medical Practice Act requires a physician to be an American citizen or "to have obtained his first papers;" therefore, he was of the opinion that the By-Laws of the State Medical Society should conform to that provision of the statute, and that the words, "or to have obtained his first papers" should be added to Section 1, after the word, "America."

Both the suggestions of Dr. McGoey and of Dr. Adler were acceptable to Dr. J. C. Sedgwick.

It was pointed out that the reason for Section "d." (Associate members) was to entitle such persons enumerated, to membership in the American Medical Association, since membership in a State Medical Association is a prerequisite for membership in the A.M.A. Dr. H. L. January dissented, and stated that associate membership is not acceptable to the A.M.A., that members are either active members of the A.M.A. with full dues, or members whose dues have been rescinded, due to financial hardship, retirement from practice, etc.

After discussion Dr. J. C. Sedgwick asked that the entire Section "d" of his committee's recommendations be deleted. Dr. P. L. Travers then moved that the remainder of the committee's recommendations for revision of the By-Laws, with the suggestions of Dr. McGoey and Dr. Adler being included, be approved. The motion

Two of these physicians suspected the worst...

but not until the significance and the incidence of amebiasis were thoroughly revealed at a hospital staff meeting. This meeting was held in a large city well north of the Mason-Dixon line, hardly a "tropical" climate, yet the incidence was high.*

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*Towse, R. C., Berberian, D. A., and Dennis, E. W.: *New York State Jour. Med.*, 50:2035, Sept., 1950.

was seconded by Dr. Robert Friedenberg and carried.

The President announced that the Constitution and By-Laws have not been printed since 1940, and that the Council has authorized the Executive Office to have them reprinted and mailed to each member. This will be done in the near future.

The President reported that the Council's recommendation concerning the establishment of a Committee on Industrial Health would require approval by the House of Delegates. Dr. W. O. Connor moved that the establishment of a Committee on Industrial Health be approved. The motion was seconded by Dr. A. L. Maisel and carried.

The President stated that the following reports from committees had been mimeographed and sent to the members of the House of Delegates preceding the meeting: **Basic Science Committee, Board of Supervisors, Cancer Committee, Committee on Diabetes Detection, Infancy and Maternal Care Committee, Advisory Committee on Insurance Compensation, Committee on National Emergency Medical Service, New Mexico Physicians' Service, Public Relations Committee, and Rural Health Committee.***

A motion was duly made, seconded, and carried that these committee reports be accepted en toto.

The report of the **Legislative Committee*** had been mimeographed and presented to the delegates for perusal. Dr. John Conway made the following correction:

"S.B. 211 was not a bill which 'permits other insurance companies, in addition to Business Men's Assurance Company, to sell New Mexico Physicians' Service,' but it was a bill which authorized New Mexico Physicians' Service to enter into contracts with other commercial carriers."

The Legislative Committee report as corrected was approved.

The report of the **Committee on Selective Service*** was also mimeographed and handed to the members for perusal. This report was approved.

Dr. Stuart W. Adler expressed his apologies to the members of his committee for not consulting them before submitting the committee report on rural health, and suggested that in the future all committee chairmen consult with committee members before submitting a committee report.

The following report of the Tuberculosis Committee was presented by Dr. Carl H. Gellenthien, Chairman:

Committee on Tuberculosis Control

Dr. Robert Koch, the obscure country doctor who discovered the tubercle bacillus, in a paper read before the Physiological Society in Berlin, March 24, 1882, and published in the Berliner Klinische Wochenschrift, 1882, wrote:

"Tuberculosis has so far been habitually considered to be a manifestation of social misery, and it has been hoped that an improvement in the latter would reduce the disease. Measures specifically directed against tuberculosis are not known to preventive medicine. But in future the fight against this terrible plague of mankind will deal no longer with an undetermined something but with a tangible parasite, whose living conditions are for the most part known and can be investigated further."

Dr. Koch's suggestion for further investigation of the tubercle bacillus has been diligently carried on and tuberculosis has been steadily disappearing in the last fifty years. From 1921 through 1945, the death rate decreased approximately 4 per cent annually.

The tuberculosis death rate per 100,000 population declined from 245 in 1890 to 200 in 1905, when the Valmora Sanatorium was started here in New Mexico, to 100 in 1921, to 39.7 in 1945, and to an all time low of 26 in 1949. When the statistics for 1950 are compiled, we anticipate a new low of approximately 24 in 100,000 population, and if the decline continues at the pace of the past five years, the rate will be as low as 15 per 100,000 in 1960.

The modern attack on tuberculosis uses many new weapons but, as in the past, so in the future, we will continue to emphasize the old, proven and reliable measures: (1) early case finding; (2) prompt and adequate treatment; (3) medical follow-up of arrested cases. No miracles are in sight.

The New Mexico Tuberculosis Association: This lay medical organization's function is mainly education and promotion of the anti-tuberculosis campaign. Members of the New Mexico State Medical Society continuously serve on the Tuberculosis Association's Board of Directors and Dr. H. C. Jernigan, Albuquerque, is President. The 1950 seal sale in New Mexico last December totaled $50,000.00. New Mexico's share is approximately $20,000.00.

Division of Tuberculosis Control: The New Mexico Medical Society, as an organization and through the activities of its individual members, helped create and organize the Division of Tuberculosis Control, New Mexico State Department of Public Health, in 1946. This division now operates one mobile x-ray unit with auxiliary power plant for use in hinterland villages and communities throughout the State where electric power is not available, and one "knock-down" unit for use in schools, meeting halls, etc., of our urban centers. The percentage of population x-rayed, in counties surveyed so far, rose from 23.3 per cent in 1947 to 41 per cent in 1950.

During the calendar year 1950, 43,502 70mm. x-rays were taken. Some 2,000 plus 14x17 x-rays taken of the suspect cases revealed by the 43,502 70mm. x-rays resulted in positive findings in 565 cases:

Five hundred sixty-five questionable 70mm. x-rays checked by follow-up 14x17 x-rays, a total of 1.29 per cent of 43,502 cases.

New Mexico Survey in 1950: 43,502 70mm. x-rays, 565 14x17 x-rays. 1.29 per cent of mass x-ray films reveal pathology—.59 per cent non-tuberculous; .70 per cent tuberculous pathology, with no indication of number or percentage of active cases requiring treatment.

These 565 14x17 x-rays reveal the following findings:

Final Diagnosis: Non-tuberculous pathology—216 cases, .59 per cent: Cardiac, 64; pleural changes, 18; other pathology, 177; diagnosis reserved, 2. Tuberculous pathology—304 cases, .70 per cent: (a.) reinfection tuberculosis, 231—pulmonary scar, 14; minimal, 160; moderately advanced, 42; far advanced, 15. (b.) Other tuberculosis, 29. (c.) Suspected tuberculosis, 44.

Unfortunately, these statistics do not show the number of cases active and requiring treatment. The National Survey to date is approximately as follows: 3 per cent of mass x-ray films reveal pathology—1½ non-tuberculous, that is, cardiac, carcinoma, lung abscess; 1½ tuberculous pathology, of which .5 per cent are active cases of tuberculosis, requiring treatment.

The Tuberculosis Committee of the New Mexico Medical Society is confused by these statistics and will attempt to determine the cause and implications of this statistical discrepancy and to offer any constructive help possible.

The tuberculosis morbidity report for the calendar year 1950 reveals 910 cases reported to the State Health Department as compared to 1,429 cases in 1949, a decrease of 519 cases. No explanation for this decrease has as yet been determined. The federal agencies, i.e., the Veterans Administration and the Indian Sanatoria and Hospitals, for many years would not report their cases but now are cooperating and reporting their cases.

In considering mortality and morbidity statistics such as these, one must not forget that while the incidence of tuberculosis is constantly decreasing the degree of decline is actually greater than is apparent because our population continues to grow; in other words, there are more people who could develop tuberculosis.

Four hundred forty-three cases of the 910 reported in 1950 originated in New Mexico.

The Bernalillo County mass x-ray survey starts May 9, 1951. Through June 9, 1951, free chest x-rays will be available to everyone in the county.

New Mexico State Tuberculosis Association, $2,000.00; Bernalillo County Tuberculosis Association, $1,000.00; Bernalillo County Medical Society (139 members), $500.00; Osteopaths (21 members), $500.00; County Commissioners, $6,000.00; City Commissioners, $6,000.00; labor unions, $3,500.00; local monies contributed, $24,000.00; U. S. Public Health Service, $75,000.00. About 200 civic organizations.

State Public Health Department has loaned its Education Director, Miss Mary Pollard, for four months. Public Service Company has loaned its full-time coordinator for six months. Four hundred fifty volunteer workers. State and National Tuberculosis Associations are participating. Type-

*Published in the June, 1951, issue.

writers, movie projectors and all tuberculosis films of the State Tuberculosis Association are being used. The National Tuberculosis Association has Frank Jones, Director of Mass Radiology, and his assistant, Miss Beryl Anderson, working on this survey. Estimate less than 100,000 people over age 15 years. Eighteen U. S. Public Health Service mobile x-ray units. One 14x17 mobile unit. All 70 mm. x-rays will be read within two weeks by U. S. Public Health Service personnel. All follow-up 14x17 films will be read by members of the Bernalillo County Medical Society. About fifteen local doctors, all qualified chest men, radiologists or chest surgeons.

Disposition of Cases: A similar survey in Denver, Colorado, in 1949 (326,326 people x-rayed; three times as many people as in Bernalillo County Survey) revealed 97.5 per cent of population normal; 1.3 per cent of population tuberculous (active, .1 per cent; questionably active, .2 per cent; non-active, 1.0 per cent); .7 per cent other chest pathology; .5 per cent cardio-vascular abnormalities.

According to this, .1 per cent of 100,000 people in Albuquerque survey, or approximately 100 cases of active tuberculosis requiring treatment; .2 per cent, or 200 cases of doubtful or possibly active tuberculosis.

In Denver, 73 per cent of all tuberculous cases for whom follow-up was recommended were referred to private physicians of their own choice and 27 per cent sent to clinics operated by the Veterans Administration and other official health agencies. That is, one must not assume that all the anticipated 100 or more active tuberculosis cases will be charity cases; 75 per cent will be able to pay for their own care. Of those unable to pay their own expenses, many will be entitled to care from the Veterans Administration, Indian Bureau, other official health agencies, churches, lodges, labor unions.

The New Mexico Public Health Laboratory under Miss Greenfield, during the past year, has done a tremendous amount of work under the usual difficulties of finance and lack of trained, competent personnel. All the members of the New Mexico Medical Society are indebted to Miss Greenfield for her valuable help, performed in her usual calm, quiet and efficient way. An expression of appreciation from this group is long overdue. In 1950, 3,245 specimens were analyzed as an aid in the diagnosis and control of tuberculosis.

	Positive for tubercle bacillus	Negative for t.b.
Sputa and urine	176	1,140
T. B. Cultures	351	1,337
T. B. Guinea Pig	38	203

Dr. Scott and Dr. Russell of the New Mexico Health Department continue to work harmoniously with us as a team. It is a pleasure to be associated with them.

Mr. Charles Sacoman is doing an excellent job as Executive Secretary of the New Mexico Tuberculosis Association. He is always anxious and willing to cooperate and we can feel that the anti-tuberculosis campaign is being conducted by capable hands.

The State Sanatorium at Socorro is filling a vital need and doing it well. The new director of the Department of Public Welfare, Alva Simpson, while new in office, has taken over quietly. He is an able administrator with practical conception of a constructive welfare program.

The waiting list at Socorro is variable and capricious. Last year, it varied from zero to thirty patients. To help solve this problem of providing prompt, proper and adequate treatment for the unfortunate patients, Valmora readily accepts these patients, and continues their treatment until a bed is available at Socorro; this at a cost to the State of $6.00 a day. This is less than the per diem cost at the State Sanatorium.

Conclusion: The Tuberculosis Committee felt that continued consultation with all agencies and individuals concerned with tuberculosis in New Mexico is desirable.

The next decade, ending in 1960, we hope will show the results of a balanced integrated program, with widespread information about tuberculosis as an individual and community problem.

Health education will reach its peak efficiency and the unhurried thorough search for a "specific" treatment and other improvements in our attacks upon tuberculosis will be increased.

There will be more emphasis and expansion of:

1. Case finding efforts by increased use of mass x-ray surveys. Tuberculin testing will be continued as a means of screening.
2. The attempts to secure proper medical care and isolation will be intensified. The efforts to provide adequate sanatorium and outpatient facilities will probably be overdone. The tendency of political bureaus like the U. S. Public Health Service and the Veterans Administration to overbuild is well known. One of the government leaders in the tuberculosis field recently stated: "If the present hysteria to build new sanatoria and facilities is continued and if the morbidity and mortality rate of tuberculosis continues to drop at the present rate, there will soon be no need for them and they will probably be converted to roadhouses and night clubs." An intelligent attempt to use existing facilities should be made before plunging into a building splurge.
3. The need for after care and rehabilitation is recognized and present effective measures will continue.
4. Some method of protecting the tuberculous family against economic distress, whether it be called a dole, charity or invalidity insurance, will probably develop.

Our Goal: 15 or less deaths per 100,000 people by 1960.

CARL H. GELLENTHIEN, Chairman.

The report of the Tuberculosis Committee as submitted was approved.

Dr. W. O. Connor, Chairman of the Indigent-Medical Care Committee, gave an oral report of his committee's activities. Dr. Connor reported that recently there has been a change in the Director of the Department of Public Welfare and, therefore, it was not possible for his committee to submit a written report as yet. The new Director has indicated his willingness to cooperate fully with the committee. Dr. Connor reported that the contracts for the new county and city hospital in Albuquerque, which will be a 250-bed hospital, will be let the first week in June. This hospital will go a long way in taking care of the hospital needs in Albuquerque, and his committee anticipates that in a few years the hospital will be a State hospital to care for indigent patients throughout the State, thereby alleviating the treatment of the more seriously indigent ill of the State.

The report of the Indigent-Medical Care Committee was accepted as reported.

The President reported that he had received a note from the Chairman of the Venereal Disease Control Committee, Dr. Sam Jelso, which stated that his committee knew of no new developments during the past year to report to the House of Delegates.

The President commended the work of the committees during the past year.

The President then stated that the next item on the agenda concerned the election of a General Practitioner of the Year. Two nominations had been received, and the President called upon the Executive Secretary to read the biographies submitted, which are as follows:

"After careful consideration and deliberation the members of the Colfax County Medical Society have nominated unanimously Dr. Carey B. Elliott as their candidate for General Practitioner of the Year. This

selection was based not only upon the excellent record which Dr. Elliott maintained, but also upon the long and patient years which he has devoted to the advancement of ethical practices and the consistent elevation of medical standards for the patients he has served. He has the sincerest respect of his colleagues and of the community. We believe that he is an outstanding candidate for this honor.

"Carey Baker Elliott was born in Holden, Missouri, May 16, 1886. He attended Missouri Valley College, graduated from the University of Missouri and received his medical degree from the Washington University in 1909. He interned at St. Luke's Hospital in Denver from 1909 to 1910, and was licensed in New Mexico in 1910.

"Dr. Elliott began his medical career in New Mexico, where he has remained to this date. He first practiced in Cimarron, and then moved to Dawson where he remained until 1919 when he moved to Raton to practice in the office that he occupies today.

"Dr. Elliott served as President of the New Mexico Medical Society in 1927, and has been President of the Colfax County Medical Society, and of the Staff of the Miner's Hospital. He was elected to the American College of Surgeons in 1937.

"Dr. Elliott has been a civic booster in his own quiet way. He is a member of the Rotary International and a past president of the Raton chapter. His hobbies include travel, photography and intensive study of New Mexico missions. Through his efforts the Miner's Hospital received approval by the American Hospital Association, and he helped and led in organizing the staff of this hospital. He has been active in all medical activities, and this practice has not stopped. Annually Dr. Elliott has left to take postgraduate training in various fields of medicine and surgery.

Respectfully submitted,
Colfax County Medical Society."

"Dr. Tobias Espinosa was graduated from the University of Colorado Medical School in 1902 and next year will observe his 50th year of medical practice.

"He was born in 1879 at Del Norte, Colorado, the oldest of thirteen children of Celso and Rafaela Espinosa. The family later moved to Boulder, where the older children worked to pay their way through the university.

"He first practiced at Chama, New Mexico, at that time a brawling railroad town, on the Denver & Rio Grande Railway line that ran from Santa Fe into Colorado. Cases of bullet and knife wounds were frequent there on railroad paydays after gambling-hall disputes.

"Dr. Espinosa moved to Albuquerque in 1903, and practiced there until 1908, when he signed for a four-year hitch in the United States Navy. He served aboard submarine tenders along the Pacific Coast until he was discharged in 1912 and returned to Albuquerque.

"He began practicing at Belen, New Mexico, south of Albuquerque, in 1914 and remained there until 1927. Travel was difficult and slow in those days over the great distances in New Mexico. Until 1917, when he bought his first automobile, Dr. Espinosa used a horse and buggy to make his rounds of the scattered villages in sprawling Valencia County. He made regular trips up and down the Santa Fe Railway line which runs along the Rio Grande Valley. The only hospitals at that time in northern New Mexico were at Albuquerque and Santa Fe.

"In 1927 Dr. Espinosa moved to Espanola, in the center of what was, and in many ways still is, one of the most remote and undeveloped sections of the United States. Even now it is not unusual for the doctor to deliver babies or perform minor surgery by lamplight in isolated farm homes.

"Dr. Espinosa arrived in Espanola at a time when electricity was a rare luxury, and roads often were only a pair of ruts skirting a precipitous mountain ledge. His automobile once was swept away when he was fording a stream that was running high after a rainstorm.

"Law and order was conspicuous in its absence in the Espanola Valley in the earlier days, and the doctor's duties on a Saturday night more often than not included a hasty call to a dance hall to patch up participants in a free-for-all.

"Dr. Espinosa estimates he has delivered more than 6,000 babies in his lifetime. Only a small percentage of them have been made in the modern atmosphere of a hospital.

"Education of the young mother in the need for sterilization . . . warning against the danger of disease in communities where modern plumbing is unknown . . . fighting ancient prejudices against modern medical practices . . . These, too, have been the duties of Dr. Espinosa over the years.

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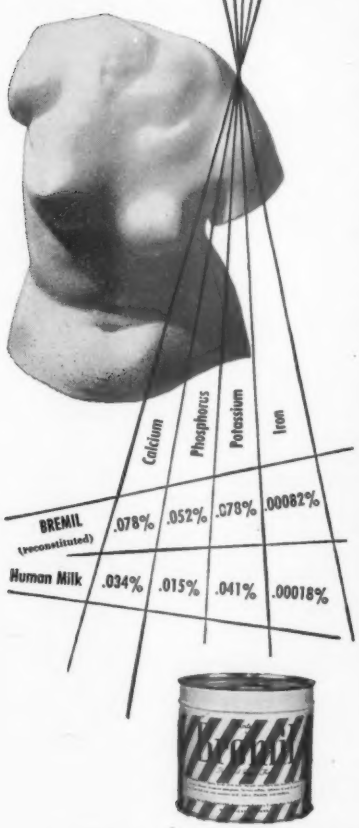

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Complete information and a trial supply may be obtained upon request.

1. Gardner, L. I.; MacLachlan, E. A.; Pick, W.; Terry, M. L., and Butler, A. M.: *Pediatrics* 5:228, 1950.
2. Nesbit, H. T.: *Texas State J. M.* 38:551, 1943.
3. May, C. D., et al.: *Bull. Univ. Minnesota Hospitals* 21:208, 1950.
4. Recommended Daily Dietary Allowances, Rev. 1948, Food & Nutrition Board, National Research Council.

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"Dr. Espinosa has long been active in New Mexico civic and medical affairs. He has served continuously on the State Board of Medical Examiners since 1935, and has been a member of the Espanola school board for sixteen years. He served as a state senator from 1924 to 1928, and has been a councilman and mayor of Espanola.

Respectfully submitted,
Los Alamos County Medical Society."

The President then asked that a vote be taken for General Practitioner of the Year. By a close margin, Dr. Carey Baker Elliott of Raton was elected.

Dr. Stuart W. Adler made a motion that Dr. Carl Mulky of Albuquerque, who has been a Past President of the State Society and a Councilor for many years, be named the first honorary member of the New Mexico Medical Society, in accordance with Chapter I, the new Section 1 (b) of the By-Laws. The motion received unanimous and hearty approval.

It was also unanimously approved that honorary membership be conferred upon the newly-elected General Practitioner of the Year, Dr. Elliott.

Mr. Bob Reid, Publisher of Southwestern Medicine, was accorded the floor and asked the delegates to consider adopting Southwestern Medicine as the Society's official publication. He enumerated advantages as: 1. The publication is distributed free to the membership, which would save the State Society approximately $900; 2. New Mexico would be the key state in Southwestern Medicine.

After discussion, a vote was taken, and there were three dissenting votes against continuance of the Rocky Mountain Medical Journal; therefore, the President reported that the State Society will continue the Rocky Mountain Medical Journal as its official publication.

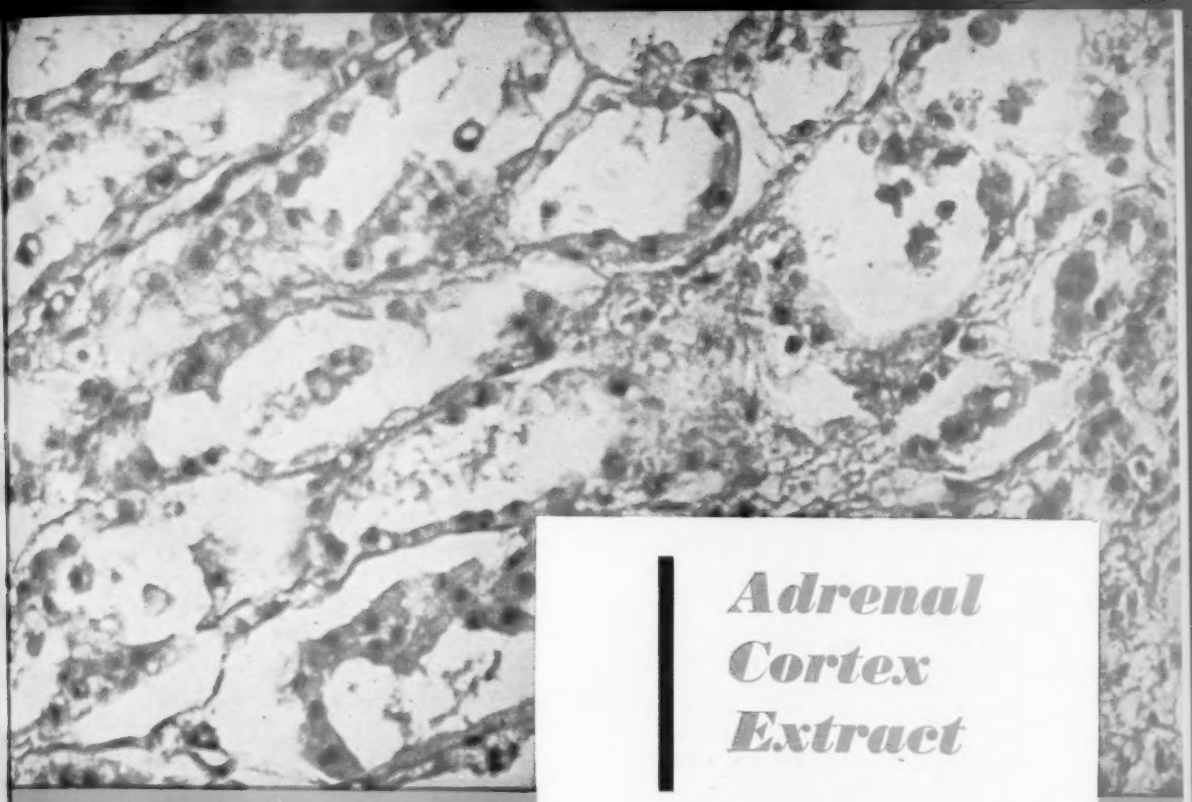
The President stated that nominations were now in order for new officers. Dr. W. O. Connor made a motion that Dr. Coy S. Stone of Hobbs be elected President-Elect by acclamation. The motion was seconded by Dr. Carl H. Gellenthien and carried. Dr. Coy S. Stone was declared elected President-Elect.

Dr. W. O. Connor nominated Dr. A. S. Lathrop of Santa Fe for Vice President. The nomination was seconded by Dr. Charles J. McGoey. Dr. Edward Parnall made a motion that Dr. Lathrop be elected by acclamation. The motion was seconded by Dr. Robert Friedenberg, and carried, and Dr. A. S. Lathrop was declared elected Vice President.

Dr. Edward Parnall nominated Dr. T. E. Kircher of Albuquerque as Secretary-Treasurer. The nomination was seconded by Dr. Robert Friedenberg. Dr. Carl Gellenthien nominated Dr. L. G. Rice of Albuquerque. It was moved, seconded, and carried that nominations be closed. Dr. J. C. Sedgwick and the Executive Secretary were appointed tellers. Ballots were passed and counted, and the President announced that Dr. L. G. Rice was elected Secretary-Treasurer.

The President announced that the terms of the Councillors for Districts 4 and 5 had expired, and that nominations were in order for Councilors for these districts. Dr. Carl Gellenthien nominated Dr. W. D. Dabbs as Councilor for District 4. The nomination was seconded by Dr. Stuart W. Adler, and it was duly moved, seconded, and carried that nominations be closed, and Dr. W. D. Dabbs was declared elected Councilor for District 4 by acclamation.

Dr. C. Pardue Bunch nominated Dr. W. E. Badger of Hobbs as Councilor for District 5.



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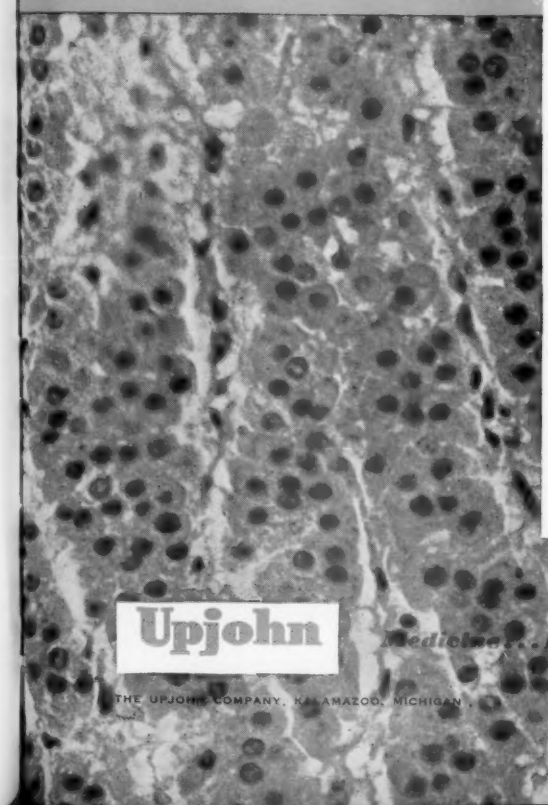

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Dr. W. O. Connor moved that Dr. Badger be elected by acclamation. The motion was duly seconded and carried, and Dr. W. E. Badger was declared elected Councilor for District 5.

The President announced that the terms for the following members of New Mexico Physicians' Service Board of Trustees had expired: Doctors A. H. Follingstad, Albuquerque; H. A. Miller, Clovis; V. K. Adams, Raton, and W. A. Stark, Las Vegas.

Dr. J. C. Sedgwick made a motion that all of these members of the Board of Trustees be re-elected by acclamation. The motion was seconded by Dr. Carl Gellenthien and carried.

The President stated that nominations were in order for members of the Board of Supervisors, whose terms had expired, which included: Doctors H. M. Mortimer, Las Vegas; W. E. Badger, Hobbs; L. J. Whitaker, Deming, and Frank W. Parker, Gallup. Dr. W. O. Connor made a motion that these doctors be re-elected by acclamation. Dr. C. P. Bunch called to the attention of the delegates that Dr. W. E. Badger was not eligible for re-election to the Board, inasmuch as the By-Laws read that the members of the Board of Supervisors may not hold an elective office, and Dr. Badger had just been elected a Councilor. Thereupon, a motion was made by Dr. Stuart W. Adler that Dr. Earl Malone of Roswell be nominated to replace Dr. W. E. Badger, and that nominations be closed, and Dr. Malone be elected by acclamation, as well as the three remaining members of the Board, Doctors Mortimer, Whitaker, and Parker. The motion was duly seconded and carried.

Dr. W. E. Nissen reported that recently the New Mexico Association of Pathologists and Radiologists had been organized, and that it would like the official sanction of the Society. Dr. W. O. Connor moved that the House of Delegates approve this organization. The motion was seconded by Dr. Brodie C. Nalle and carried.

The President reminded the delegates of the tremendous importance the exhibitors are to the annual meetings of the State Society and urged everyone to personally visit each exhibit and sign their names, showing that they have been visitors.

Dr. Earl Malone made a motion that a vote of thanks be extended to the members of the Santa Fe County Medical Society for the excellent planning and fine work they have done in putting on the Convention. The motion received a hearty applause.

The President asked if there were an invitation for the meeting next year. There being none, the President stated that an announcement would be made later concerning the place and dates for the meeting.

Dr. A. E. Reymont, Chairman, Committee on National Emergency Medical Service, asked for a resolution which would authorize a letter from the President of the New Mexico Medical Society to Dr. James R. Scott, Director, State Department of Public Health, recommending that the booklet, "Health Services and Special Weapons Defense," be sent to every member of the Medical Society by the State Department of Public Health. The President stated that no formal action was necessary, and asked the Executive Secretary to write Dr. Scott accordingly.

Dr. W. O. Connor, on behalf of the New Mexico Medical Society, expressed appreciation to

the outgoing President, Dr. I. J. Marshall, for the splendid work that he has done during the past year. A hearty applause followed.

Dr. I. J. Marshall thanked Dr. Connor, and said: "Gentlemen, being your President has been a distinct honor and pleasure that comes only once to a man, and I certainly appreciate it and have enjoyed working with you. I must say that the committeemen this year, I believe, have done more work than they have ever done before. Certainly our reports have been more complete. We are making steady progress. There is still much to be done, and no one realizes that as much as an outgoing President. I want to thank you for your cooperation, and I assure you that being your President has been a great honor."

The President then asked two Past Presidents, Dr. Carl H. Gellenthien and Dr. W. B. Cantrell, to escort the incoming President, Dr. Leland S. Evans, to the chair. The gavel was presented to Dr. Evans by Dr. Marshall.

Dr. Evans said: "It is certainly an honor to be elected, and I can assure you that I just hope to do as good a job as Dr. Marshall has done this past year. I know that Dr. Marshall has put in a great deal of time. We are going to try to continue doing the work that we are doing. We have already appointed our committees for the new year, including the new committee that was established today. In selecting our committeemen we have tried to spread out a little on committees without too much duplication. We hope that you can see fit to get your committees together during this Convention, particularly the Committee on Public Relations. I shall be happy to meet with any of the committees at any time. We are going to try to work and work hard this next year, and continue the good work that has been done in the past."

The business of the Sixty-Ninth Annual Session of the House of Delegates having been completed, the new President declared the meeting adjourned.

L. G. RICE, JR., M.D.
Secretary-Treasurer.

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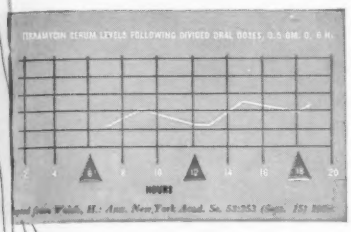

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COLORADO
State Medical Society

250 Years of Medical Service

Five San Juan Basin physicians whose combined service to the people of southwestern Colorado totals 250 years were honored June 2 by the San Juan Medical Society at a testimonial banquet in Durango.

The five veteran physicians are: Dr. Royal W. Calkins, Cortez; Dr. Carl Lefforge, Ignacio; Dr. Jay R. Trotter, Mancos, and Drs. Wordsworth M. Elliott and B. J. Ochsner, both of Durango.

Each man has practiced medicine for 50 or more years, a unique distinction for any community. Dr. Trotter was unable to be present at the ceremony, which brought together members of the San Juan Medical Society and their wives for the banquet honoring the distinguished service of the five doctors.

Dr. Leo W. Lloyd was master of ceremonies. A bronze plaque was presented each of the men honored in commemoration of his 50 years of service. A short talk about each person honored was given by a colleague. They were as follows: Dr. C. L. Mason for Dr. Ochsner; Dr. R. T. Speck for Dr. Calkins; Dr. R. L. Downing for Dr. Lefforge; Dr. A. L. Burnett for Dr. Elliott, and Dr. Lloyd for Dr. Trotter.

The thoughtfulness of the San Juan Medical Society in honoring this group of distinguished practitioners constituted fitting tribute to them and also served as a reminder to all of their long and faithful service to humanity.

As a result of the affair, the Durango Herald-Democrat in an editorial listing the names of the five physicians in large type, commented as follows:

"Yesterday you five men, all doctors, were honored at a meeting of the San Juan Medical Society for your record of fifty years of ministering to the physical needs of the people of the San Juan Basin.

"The meeting was attended primarily by doctors. But there are hundreds and hundreds of us ordinary folks of the community who would have liked to be there too, to pay you the homage that you have earned while two generations were born and grew up here.

"Doctoring these days is an easy thing compared with the hardships that a doctor met every day, fifty years ago, when you began your careers of care and mercy. The automobile was rare in those days, and the roads were bad. There was no penicillin, no other wonder drug.

200 YEARS OF MEDICAL SERVICE

Pictured above are four San Juan Basin physicians honored recently at Durango by the San Juan Medical Society and who have been in practice for 50 years. The guests of honor are: left to right, Dr. B. J. Ochsner, Durango; Dr. Carl Lefforge, Ignacio; Dr. W. M. Elliott, Durango, and Dr. Royal W. Calkins, Cortez. A fifth San Juan Basin physician, also with 50 years of service, is Dr. Jay R. Trotter, Mancos, who was unable to attend the celebration.

Anesthetics were nothing compared with those in use today. Hospitals were few and far between.

"A doctor had to be, not only a doctor, but very often a nurse, a dietitian, a surgeon and a psycho-analyst. He was also a good family friend and a ministering angel. The kind of a doctor that Sinclair Lewis made immortal in his book, "Main Street." It was, he said, a portrait of his own father who every now and then had to perform a major operation upon some patient stretched out on an old-fashioned kitchen table in some remote Minnesota farmhouse.

"It is because you men started back in those difficult days a half-century ago that your careers and your achievements are remarkable. You came up the hard way, and for that we honor you."

Personal News From Korea

The following personal letter addressed to one of the editors of the Journal was received recently from Dr. J. Burris Perrin. Dr. Perrin is widely known in Colorado, having been in practice in Denver and later in the State Health Department and most recently as Public Health Officer for the Northeast Colorado district with headquarters in Sterling. Recently Dr. Perrin, as a reserve officer of the United States Public Health Service, was called to active duty and sent with the United Nations Public Health Unit to Korea.

The letter is revelatory of conditions which medical men are facing in the Korean war. Dr. Perrin's letter follows:

"Dr. James B. Perrin
UNCACK
8201st A.U.
A.P.O. 59 c/o P.M.
San Francisco, Calif.
May 22, 1951.

"Chongju-Korea.

"Dear Harvey:

"Greetings from Korea! And what a place it is. The hills, lakes, and rivers are very picturesque, but the smells and filth of the cities, towns and villages are something you have to experience to really believe.

"I flew by Northwest Airlines, from New York

via Minneapolis, Edmonton, Anchorage, Alaska, Shemya Island at the tip of the Aleutians, and Tokyo. Thence by U. S. Air Force plane to Pusan, Korea. I am assigned or loaned by the WHO of the U.N. to a military team of UNCACK (United Nations Civilian Assistance Command Korea), as an advisor in Public Health.

"At the present time we are carrying on a mass immunization program in Chung Chong Pukto Province (state), against typhus, typhoid and smallpox. We have nine teams of Korean doctors, nurses, and clerks doing the actual work, and move to different 'Myons' (counties) each week. All vaccines and transportation is furnished by UNCACK. Approximately 96,000 doses of each vaccine are used each week. This program will be completed in this Province July 1.

"Our offices, quarters, food, etc., so far are very good, but if the Reds break through again, we will have to make a quick exit. As it is, we go armed all the time, because of guerilla activity. Our work is with the Provincial Korean Government, and I work in close liaison with their Public Health Officials, through interpreters, of course. I hope everything goes well with you and the state society. Possibly I can be back in Denver for the Mid-Winter Clinics in 1952.

"Best regards,

"BURRIS."

ATTENDANCE AT A.M.A.

The American Medical Association's Annual Session was well represented by the following physicians from the Colorado State Medical Society: Serge A. Aiello, Piero Albi, K. D. A. Allen, George Balajty, John S. Bouslog, William T. Brinton, George R. Buck, Clough T. Burnett, Harry J. Corper, T. Donald Cunningham, Douglas Deeds, Edgar Durbin, Arthur H. Earley, Franklin G. Ebaugh, Robert W. Fraser, William H. Halley, Ervin A. Hinds, Allan Hurst, James E. Hutchison, John T. Jacobs, C. F. Kemper, Herman I. Laff, Lula O. Lubchenco, Frank B. McGlone, Walter C. Metz, Arnold Minnig, Thomas W. Moffatt, Samuel P. Newman, George L. Pattee, McKinnie L. Phelps, James A. Philpott, Jr., Abe Ravin, Rose Ravin, William A. H. Rettberg, Fritz Rosenberg, Charley J' Smyth, Hermann B. Stein, Walter E. Vest, Jr., Walter W. Wasson, W. Bernard Yegge, all of Denver; Harry C. Bryan and Fritz Nelson of Colorado Springs; Merrill O. Dart, Englewood; Fred A. Humphrey, Fort Collins; Theodore E. Heinz, Greeley; Frank B. Olsen, Grand Junction; Francis S. Adams and George A. Unfug of Pueblo and William S. Klein, Spivak.

Obituary

GRANVILLE A. HOPKINS

Dr. Granville A. Hopkins, pioneer physician of Glenwood Springs, died at his home on June 2, following a long illness.

Dr. Hopkins was born August 1, 1880, in Buena Vista, Colorado. When he was five years old his family moved to Glenwood Springs. He attended high school there and was graduated from the Denver Gross Medical School in 1907 which later united with the University of Colorado Medical School.

On October 1, 1927, Dr Hopkins founded the Hopkins Hospital in Glenwood Springs, which he owned and managed until the time of his death. He was the physician for the local organization of Eagles and on March 19, 1950, he received the F.O.E. Civic Service Award.

WYOMING
State Medical Society

Drs. Andrew W. Bunten, Cheyenne; Roscoe H. Reeve, Casper, and Oliver K. Scott, Casper, were present at the American Medical Association's Annual Session in Atlantic City.

COLORADO
Medical School Notes

Appointment of an assistant professor of biochemistry at the University of Colorado School of Medicine has been announced by Dr. Robert C. Lewis, dean of the school.

He is Dr. Wilhelm Richard Frisell, instructor in physiological chemistry at Johns Hopkins University School of Medicine, Baltimore, Md. The appointment will become effective July 1.

Born April 27, 1920, in Two Harbors, Minnesota, Dr. Frisell studied one year in the laboratory of Professor Arn Tiselius, famous Nobel prize winner, in Sweden.

He was graduated with a bachelor's degree from St. Olaf College, Northfield, Minnesota, in 1942 and received his master's degree in 1943 from Johns Hopkins. He received his doctor's degree in 1946, and since that time has been a member of the staff.

COLORADO
State Health Department

NEW REGULATIONS FOR HOSPITALS IN FORCE

On December 11, 1950, the Colorado State Board of Health adopted the Standards for Health Establishments which have been classified according to the scope of the establishment concerned, as well as on the basis of technical qualifications and training of the staff or persons in charge of its operation and their abilities to perform the functions for which they were established. The classifications are as follows: General Medical Surgical Hospital, Psychiatric Hospital, Cummunicable Disease Hospital, Pediatric Hospital, Tuberculosis Hospital, Community Clinic, Chiropractic Hospital, Tuberculosis Home, Maternity Home, Nursing Home, Convalescent Home for Adults, Convalescent Home for Children and other similar institutions.

The intent of these standards is to establish the basic principles of construction, maintenance and operation which in the light of existing knowledge insures modern and adequate care

WANTADS

for patients in all health establishments classified and licensed by the State Department of Public Health.

The Colorado State Board of Health, during 1950, had before it the revision of rules and regulations governing hospitals and related institutions.

An advisory committee was appointed in January, 1950, for the purpose of studying the standards which were first adopted in 1942, revised in 1947 and 1949. Representatives of all organizations providing patient care were invited to participate. Periodic meetings were held each month and subcommittees were appointed for reviewing specific sections of the standards. Many of the subcommittees were composed of specialists in their particular field. Also standards from other states and organizations were reviewed and given proper consideration.

MONTANA
Medical Association

The following doctors listed below attended the American Medical Association's Annual Session in Atlantic City: George H. Barmeyer, Missoula; Joseph H. Brancamp, Butte; F. Hughes Crago, Great Falls; Eri M. Farr, Billings; John B. Frishee, Butte; Everett H. Lindstrom, Helena; Raymond F. Peterson, Butte, and Roland G. Scherer, Bozeman.

UTAH
State Medical Association

UTAH REPRESENTED AT A.M.A. IN ATLANTIC CITY

Listed below are the physicians who registered at the American Medical Association's Annual Session in Atlantic City: Roscoe B. Anderson, John Z. Brown, Ulrich R. Bryner, Frank F. Daughters, James P. Kerby, Elmer M. Kilpatrick, William D. Melosh, William R. Milddlemiss, Theodore H. Noehren, Leslie J. Paul, Thomas E. Robinson, William R. Rumel, Scott M. Smith, J. Russell Wherritt and V. P. White, all of Salt Lake City; Stanley M. Clark and Owen P. Heninger of Provo; George M. Fister and Wendell J. Thompson of Ogden; George B. Madsen of Mt. Pleasant and John G. McQuarrie of Richfield.

REPORT OF THE AUXILIARY TO THE UTAH STATE MEDICAL ASSOCIATION

The annual meeting and election of officers of the Auxiliary to the Utah State Medical Association was held on May 22, 1951, at the Hotel Utah in Salt Lake City, with Mrs. Orin A. Ogilvie, presiding.

Reports of the various County Auxiliaries in the state showed extensive programs in Legislation, Health, Cancer Drives, Nurse Recruitment, Heart Clinics, Civil Defense, promotion of Today's Health, and assistance in the improvement of the State Mental Hospital in Provo. Each Auxiliary had done work for the American Red Cross. Mrs. Ogilvie gave a fine report of her trips throughout the state, and commended all the Auxiliaries on a big task, well done.

The report of the Nominating Committee was given by its chairman, Mrs. Claude L. Shields. The following were elected: Mrs. Russell Smith, President, Provo; Mrs. Vernal Johnson, President-elect, Ogden; Mrs. Vernon Stevenson, First Vice President, Salt Lake City; Mrs. William Gorishek, Second Vice President, Standardville; Mrs. Riley G. Clark, Recording Secretary, Provo; Mrs. James B. Westwood, Corresponding Secretary, Provo; Mrs. Roy A. Darke, Treasurer, Salt Lake City; Mrs. Roy Hammond, Historian, Provo; Mrs. Leo W. Benson, Auditor, Ogden.

A memorial service was given by Mrs. O'Neil Rich in memory of Mrs. Charles Ruggeri, Mrs. E. R. Murphy, Mrs. Horace Holbrook, and Mrs. Earl Phillips, who passed away this past year.

Luncheon in the Junior Ballroom followed the meeting. Past Presidents of the State Auxiliary were honored at this time. Installation of the new officers was held. Mrs. Ogilvie presented the gavel to Mrs. Smith, who gave a short talk on plans for future work and programs, as well as a brief personal history of each of the new officers. The program featured Richard Clinger, age four, who gave four piano selections. Mrs. John Z. Brown, Fourth Vice President of the National Auxiliary, spoke briefly.

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